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"IF THOU SEEKEST A BEAUTIFUL PENINSULA LOOK AROUND"

(Motto on Great Seal of State)

State Capitol, Lansing.

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STATE OF MICHIGAN

Public Domain Commission and Immigration Commission

Augustus C. Carton, Commissioner of Immigration.
Glen R. Munshaw, Deputy Commissioner of Immigration.

MICHIGAN

Agricultural, Horticultural and Industrial Advantages.

IMMIGRATION PUBLICATION.
June, 1914.

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FOREWORD.

This book is published under authority of Act 333 of the Public Acts of 1913, which act provides that the Public Domain Commission shall also be constituted an Immigration Commission and provides further that such Commission shall appoint a Commissioner of Immigration and a Deputy Commissioner of Immigration.

It is the duty of these officials to collect and compile information relative to the advantages and opportunities afforded by this state to the farmer; the merchant; the manufacturer; the home and pleasure seeker; and to distribute the information so gathered and compiled in such manner as the Commission shall deem advisable.

In carrying out this function it is the chief object of the Commission to encourage and direct the settlement upon and the development of Michigan's good agricultural lands, which in turn makes this publication of a two-fold purpose:

First, to stimulate Michigan's own people to a deeper appreciation of the state in which they live and to encourage a greater degree of agricultural development by calling their attention to the opportunities and possibilities afforded by their home state, and

Second, to encourage the settlement upon Michigan's agricultural lands by people from the neighboring states and Canada, and by intelligent rural immigrants from Central and Northern Europe.

This work, being the first of its kind compiled to meet a pressing demand, is, in fact, but a synopsis of the vast subject under consideration. Within its covers, however, will be found many facts which will prove of interest to the citizens of Michigan as well as to non-residents. They indicate the greatness of the state in area; in achievement; and in the splendid opportunities and future possibilities.

It is hoped that this book will provide information not heretofore obtainable, to those interested in Michigan, and will be the cause of inducing many who read it to visit the state and EXAMINE FOR THEMSELVES the advantages and opportunities offered.

Michigan invites inspection and need make no extravagant claims to establish the fact that it offers to the farmer, the homeseeker and manufacturer opportunities unsurpassed by any other state in the Union.

AUGUSTUS C. CARTON,
Commissioner of Immigration.
GLEN R. MUNSHAW,
Deputy Commissioner of Immigration.

BRIEF HISTORY OF THE STATE'S EARLY DEVELOPMENT.

Long before any white man had touched the coast of what is now the State of Michigan, or had gazed with covetous eyes on its magnificent forests, wandering tribes of Indians loitered along its shores and lived upon the whitefish with which its crystal waters were teeming and the deer that filled its forests. The headquarters of these wandering tribes was the Sault De Ste. Marie, where the fish were most plentiful. But the Indians were not destined to hold undisputed sway.

As early as the first part of the 17th century two French traders, lured by the game which filled the forests, landed on Michigan shores. Temporary structures were erected from time to time until 1672, when Father Marquette, a Jesuit missionary, founded the first permanent settlement at the Sault De Ste. Marie. From this time on the French, through their grace and ease and tact, as well as their unusual ability to adopt the ways and customs of the Indians, gradually insinuated themselves into the country.

In 1701 LaMotte Cadillac, recognizing the importance of "The Straits," from both a strategic and a commercial point of view, founded a permanent settlement at Detroit. This marks the true beginning of civil life in Michigan. In spite of the pronounced advantages of its position, Detroit did not increase rapidly in population, and the extreme sociability of the French people prevented their spreading out into the wilderness. Prof. Hinsdale, in "The Old Northwest," tells us that the French had three objects in view in coming to New France, "Religion, dominion, and the fur trade." And consequently wherever they came were found "a church, a military defence, and a trading post. The trader was opposed to settlements because they meant the destruction of his trade. The Jesuit was opposed to them because they meant the destruction of his mission field. The 'voyageur' and the 'coureur des bois' were opposed to them because they meant the destruction of their favorite modes of life. Only the soldier was left and his business was not colonization." The first settlements, and for many years the only settlements in Michigan, were Michilimackinac and the Sault De Ste. Marie. The extreme hostility of the Indians in the region of Lake Erie, as well as the greater length of the route, turned the tide of French emigration towards the north. The English were kept pretty strictly to their territory east of the Alleghanies by the difficulties of the passage across the mountains. Thus were the rich lands of southern Michigan preserved for the energetic American farmer who, overcoming all obstacles, pushed his way into the forests, quickly transforming them into thrifty agricultural districts.

About the middle of the 18th century came the struggle between France and England for disputed territory, in which each hoped to gain dominion over the entire northwest country. The French had become so thoroughly allied with the Indians that in this struggle the latter, with one accord, cast their lots with the French "Fathers," as they called them. Notwithstanding, in 1760 the English gained the supremacy and agents were sent in all directions to demand allegiance from the French and also from the Indians who pretended to be overjoyed at the outcome of the contest.

The English at once endeavored to introduce some system and order into the new country which had fallen into their hands, but it takes more than law to overcome the habits of a century and a half. The French were too inactive and too well satisfied with their present mode of existence to exert themselves to adopt new customs; the forests and streams furnished them with the necessary food and they enjoyed their roving existence too thoroughly to settle down to regular ways and habits. The English had no faculty whatever for pacifying the Indians. They persisted in treating them with a scorn and contempt which the haughty savage resented in the extreme, and all the more because the French had shown him such unusual consideration and courtesy. This difference in the attitude of the two nations towards the Indian was one of the main factors in withholding civilization from the lake country, long after Ohio and Illinois had become flourishing commonwealths.

Although the American Colonies had won in their struggle with Great Britain, it was not until

Wayne's decisive victory over the Indians on the banks of the Maumee and the subsequent treaty at Greenville that the Americans took possession of the posts of the Northwest Territory. Plans for government were then talked and the Ordinance of 1787 became the law ruling all of the territories in the United States.

The third article of the Ordinance is especially worthy of note on account of the vast influence it has over the character of Michigan's population. It states, "Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." Movements in favor of education for the common people, to which the Ordinance of 1787 gave a new stimulus, were started from time to time. The land ordinance of 1785 set apart the sixteenth section of land in each township for common schools, and one entire township for the aid of schools and colleges. This was the first step toward providing for the people of the Northwest Territory the system of free education of which the state is now justly proud.

In 1800 the lower peninsula of the present state of Michigan constituted nine-tenths of the county of Wayne, the other tenth being within the boundaries of the present states of Ohio and Indiana. The upper peninsula was, with the exception of the territory in the immediate vicinity of the Sault De Ste. Marie, unexplored country. The census returns for that date show 3,757 people in Michigan, 551 of whom were from Mackinaw county, 2,068 from Detroit, and as many more from within a radius of ten miles of Detroit, and most of the remainder from the banks of the River Raisin within the limits of the present county of Monroe. The highway from Ohio to Detroit passed through Monroe county, and settlements, closely packed together for the sake of protection against the Indians, gradually sprang up along the River Raisin for a distance of eight or nine miles.

The year 1805 saw Michigan cut off from Ohio and Indiana and established as an independent territory, the government to be based on the ordinance of 1787. This territory extended on the west through the center of Lake Michigan north to the intersection with Lake Superior, on the east to the water boundary, on the south to a line due east and west from the extreme southern point of Lake Michigan, and on the north to the international boundary. The first governor to be sent to the new territory was General William Hull of Massachusetts, a man of no experience in frontier life and entirely unacquainted with conditions which he must meet. Hull's first glimpse of his new dominion must have been a disappointment indeed. Instead of a comfortable settlement, well-housed and prosperous, only the smoking ruins of the town of Detroit and the discouraged inhabitants in a homeless and pitiable condition met his gaze. His first care was to relieve the immediate needs of the people, then he turned his attention towards rebuilding the city. Help from the general government was secured, and Detroit was again laid out and this time on much more generous lines than before. A bank of Michigan was next organized and without authority from the government. However, Hull's attention was soon absorbed by troubles with the Indians, who were a constant source of annoyance and fear to the white settlers already in the territory, as well as a very active agent in preventing others from coming in. At the close of the first decade of the 19th century, the increase in population was only 1,005 or 26 per cent in the entire territory of Michigan. In the American state papers we find that, in December, 1811, the 4,860 inhabitants of Michigan were distributed as follows: 1,340 on the Miami, the Raisin and the Huron of Lake Erie; 2,227 at Detroit, the River Rouge, Ecorse and the Huron of Lake St. Clair, and 1,070 on the Island of Mackinaw and in the scattered settlements.

It was at this critical and discouraging period of Michigan's history that Lewis Cass, a young lawyer of marked ability and unusual strength and uprightness of character, became governor of the territory of Michigan. Cass had lived the greater part of his life in the Northwest Territory and understood life on the frontier thoroughly.

Michigan was very little known at this time, the general impression being that it was mainly marsh land, entirely unfit for cultivation. This impression was confirmed by the false report of a party of surveyors sent out by the United States government to survey the new territory. Two million acres of land had been set aside as bounty land in order to induce settlers to come to Michigan, but for some unknown reason the surveyors reported the whole of southern Michigan to be nothing but marshes and

deserts with scarcely one acre fit for cultivation. Not until 1818 was the public land office secured by the territory, and not until then did Michigan commence its growth as an American settlement.

Another feature most discouraging to immigration was the lack of good roads. Cass was clearheaded enough to realize that there must be a decided change within the territory itself before there could be any hope of Michigan's fulfilling her rich destiny, and he at once set about making the change. His first care was to relieve the distress of the suffering people and to arouse in them a little hope for and interest in the future. He then turned his mind towards pacifying the Indians, not by loading them with gifts, but by gaining their confidence through fair and just treatment, and he soon succeeded in making several treaties with them whereby title was secured to the greater part of the land in southern Michigan. Cass also secured the aid of the government in building a road from Detroit to Chicago, and made plans for the building of several others. In 1817 the first regular Michigan newspaper, the Detroit Gazette, was published and the following year the first steamer on the lakes, the Walk-in-the-Water, came through Lake Erie to Detroit, the same boat astonishing the Indians in 1819 by steaming into Mackinaw Island without any visible means of locomotion. As a direct result of the strenuous efforts of Governor Cass, the population of Michigan almost doubled in the decade from 1810 to 1820, and most of the increase was in the last two or three years of the decade.

Until about this time all of Michigan was contained in the single county of Wayne, which was divided into judicial districts. Cass conceived the idea of dividing the territory into smaller county divisions, and in 1815 Wayne county, which was to be co-extensive with that part of the southern peninsula to which the title was clear, was laid out with Detroit as the county seat. Two years later Monroe county, comprising all of the present county of Monroe together with Lenawee and a corner of Wayne, the south half of Washtenaw and a corner of Jackson, was established in honor of the visit to the territory of the Hon. James Monroe. The village of Monroe was also established the same year under the name of Frenchtown. The next year Macomb county, embracing most of the eastern half of Michigan between the northern boundary of the present county of Wayne and the thumb of the mitten, and Michilimackinac, embracing all of the lower peninsula north of Macomb, were laid out. Four years later Macomb county was reorganized to consist practically of the same territory which it comprises today. But most of the vast territory remained a wilderness for many years. A little settlement sprung up at Mt. Clemens, a saw and grist mill were erected, and in 1821 a schooner was built to ply between the new town and Detroit. This gave the little Village a prestige over the surrounding settlements. The county soon began to increase more rapidly in population and in 1828 a new impetus was given when a government road was built from Detroit through Fort Gratiot to Lake Huron.

A road was built from Detroit to Pontiac in 1818, and in 1820 the county of Oakland was organized with Pontiac as the county seat. Settlers were attracted to this part of the country from the East because of its proximity to Detroit and because of the beautiful openings interspersed thickly with crystal lakes which met the gaze of the eager "land-looker." The class of immigrants who came to Oakland county is worthy of notice, being an intelligent and refined class of New England farmers, who came to Michigan with the idea of working hard to carve out, from the wilderness, homes for themselves and their children. The geographical position of Oakland county gave it unusual political and commercial importance, and in 1827 there were 1,400 people in the county. By 1830 it was fairly well settled, while Pontiac was the center of trade for all the region north and northwest as far as Saginaw.

The country along the water route, from Lake Erie to Lake Huron, had been settled to some extent before this time, but was too much out of the way to increase very rapidly in population. The advent of the steamboat in 1819 drew immigrants to this part of the country, and in 1820 St. Clair county was organized. In the same year the steamer St. Clair was built at Marine City, which is one of the most extensive ship building towns in Michigan today. Two years later Sanilac county, comprising the present counties of Huron, Tuscola and Sanilac, was laid out by proclamation of Governor Cass, thus

completing the organization of the country on the east coast of Michigan as far north as the extremity of the thumb.

In 1823 a land office was opened in Monroe for the sale of lands in the southern part of Washtenaw and Jackson counties and the country west of Monroe to Lake Michigan. The difficulty of the stage journey, which was the only way of reaching Lake Erie from the east before 1825, had proved a serious obstacle to the rapid settlement of the new country, but the completion of the Erie canal in that year gave the necessary impetus to immigration, and settlers from New York and New England were soon pushing into the territory. The following year found at least a half dozen steamers plying on the lakes, and the trip from Buffalo to Detroit being made daily. During the year 1825 we find the county of Lenawee organized with Tecumseh, which was the first point of settlement on account of the splendid hydraulic power of the River Raisin at that point, as the county seat.

In 1826 Washtenaw county, which had been opened to settlers through the territorial road which passed through Ypsilanti, was organized, taking in not only its present territory, but parts of Ingham, Livingston and Jackson counties. By 1830 Washtenaw could boast of 4,032 inhabitants. Soon after the organization of Lenawee county in 1826, the territory on the west to Lake Michigan was organized into the township of St. Joseph and attached to it. The oak openings found through this portion of the state were especially attractive from an agricultural point of view, and consequently, although there were but few inhabitants there at that time, St. Joseph and Cass counties were formally organized in 1829, and schools, postoffices and grist mills were soon in active operation. Ingham county, with its present boundaries, was also organized the same year. By 1830 the population of the state had increased to 31,639, an increase of 260.9 per cent as compared with the 84 per cent of the previous decade.

In 1831 Berrien county, to which settlers had come on 1829, was organized. The same year the government land office was removed to White Pigeon, and in 1834 to Kalamazoo. This marks the beginning of the active settlement of western Michigan. In 1830 a rough road was built from Ann Arbor to the village of Jackson, over which the hardy pioneers pushed their way. They found an abundance of hay and plenty of wild game, but the nearest grist mill, to which it was necessary to make occasional laborious trips, was situated at Dexter in Washtenaw county. This prevented rapid settlement, but two years later a sawmill was established and Jackson county was organized. The same year Kalamazoo county was organized, and Van Buren established and attached to Cass, although not formally organized until 1837. Settlement in Calhoun county began in 1830 at the junction of the rivers, Marshall being the first point of settlement and Kalamazoo the second. Soon the territorial road was built and other roads marked out, and, in 1833, both Calhoun and Branch counties were organized. The organization of the lower tier of counties in Michigan was completed in 1835 by the organization of Hillsdale county, and the second tier by the organization of Van Buren in 1837. The spirit of enterprise which characterized the first half of the decade did much toward the improvement and rapid settlement of southern Michigan.

As early as 1832 the population of Michigan had increased to such an extent that the question of admission into the Union as a state began to be agitated. According to the Ordinance of 1787, 60,000 inhabitants were necessary before a territory could apply for admission, and in 1834, when the census showed 87,278 inhabitants, steps were at once taken to form a state government and to mark off the exact limits of the new state, but a dispute with Ohio arose concerning the southern boundary. Both states refused to yield their right to the strip of disputed territory, and Congress, in turn, refused to admit Michigan into the Union as a state until the question was settled. Finally, in order to bring an end to the difficulty, Congress offered Michigan the upper peninsula instead of this narrow strip of land, but, at a convention held at Ann Arbor in 1836, the offer was refused. It was soon seen, however, that nothing was being gained by the delay, and early in 1837 Michigan, enriched by the valuable mining districts of the upper peninsula, was admitted into the Union as the twenty-sixth state, and Stephen T. Mason was chosen governor.

The Saginaw Valley had been a point of attraction for settlers for several years on account of its fine location at the head of the bay, but as yet it was very difficult of access, the only route being an

exceedingly rude path from Detroit through Flint. A few of the more farseeing of the pioneers felt sure that a large city was to grow and flourish upon this site, but it was hard to make the many feel that the uninviting marshes, of which most of the valley was composed, would ever be of value. The spirit of speculation had set in however by 1835 and Saginaw county was organized. Soon a "wild cat" bank was established, a steamer arrived and city lots were sold at fabulous prices. Allegan and Lapeer counties were organized the same year, the latter including more townships on the north and east than it does at the present time. The year 1836 marks the organization of Livingston, Genesee and Kent counties. Immigrants came into Livingston county over the Grand river road, attracted largely by the grist mill which was situated at Brighton. Kent county had been settled largely by settlers who came through Grand Haven, the gateway to the northern part of Ottawa county. This had been the headquarters of twenty trading posts established by the American Fur Company in 1827, but immigration, in the true sense of the word, did not begin until 1833-4, from which time Grand Haven has stood for development along the Grand river. At this time two small saw mills, near the village of Grand Rapids, met all demands. As only prairie roads led to the interior, the only market was Chicago, then a city of about 2,000 inhabitants. In 1837 Ottawa county was organized, although all the southern part was a wilderness for some time to come. In the same year the counties of Eaton, Shiawassee, Van Buren and Ionia were organized. Bellevue, in the southwest corner of Eaton county, was opened to settlement by a road built through from Battle Creek in 1835. The lime quarries underlying one section of land were an attraction and some attempts were made to ship the product that same year, but these proved a failure on account of the cost of shipping. The heavily timbered lands in the northern part of the county attracted lumbermen in 1835-6, and the manufacture of pot and pearl ash and saleratus added greatly to the clearing up of the land. Charlotte was made the county seat in 1838. In 1833 the Dexter colony, following an Indian trail which was practically the present Grand river road, pushed their way into Shiawassee county. Owosso was laid out at the fork of the river in 1835 and a few months later was made the county seat of Shiawassee county. The first settlers had entered Van Buren county from Cass, thus settling the southern part first. Later the territorial road opened the country to settlers from the east and it was detached from Cass. Ionia county owes its settlement at this time to the famous Grand river road. The next counties to be organized were Barry and Clinton in 1839, completing the four southern tiers. Settlement in Barry did not begin until late in the decade, when its rich soil attracted settlers from Calhoun and Kalamazoo counties. The settlement of Clinton county, however, began much earlier. A road was cut through from Ann Arbor in 1833, intersecting the Dexter road in Shiawassee county, but poor accommodations and poor roads made settlement slow until 1837, when schools, mills and roads were established and the rush began.

Immigrants were now pouring into the state in a continuous stream overland and every steamer which crossed Lake Erie to Detroit was crowded. As a result of this rush for land, prices rose with astonishing rapidity. The people became excited at the prospects which seemed to be opening up before them, and the rulers of the new state, forgetting prudence, plunged madly into extensive schemes for internal improvements. Three great systems of railroads, the Southern, Central, and Northern, were planned, and the Central was constructed as far as Kalamazoo. All three were sold to private corporations in the early forties. But the people themselves were wealthy in nothing but the ability and energy to produce, and as the demand for money to carry on the plans of the government became pressing, the simple plan of making more money was put into operation. Banks sprang up as if by magic in every part of the state and the country was flooded with bank notes of every description. A suspension of specie payment was tried and then, to relieve the pressure, the government prescribed the homeopathic dose of unlimited banking or "wild cat" banking as it was popularly termed. The situation reached a climax at the end of the decade when only six banks were doing business and over forty were in the hands of receivers. The great works of internal improvement were at a standstill for lack of funds, and a general panic prevailed throughout the state. But money difficulties could not stop the swift stream of immigration at once and the population of the state continued to increase for

some time at a marvelous rate, the census of 1840 showing 212,267 people, an increase of 570.9 per cent over the previous census.

As early as 1826 a large part of the upper peninsula was organized as Chippewa county, with the Sault De Ste. Marie as county seat, and in 1843, nearly twenty years later, it was reorganized to consist of much less territory, but still more than at the present time. A few settlers had wandered into the county of Delta by this time and it was organized the same year. Two years later Houghton county, with Schoolcraft, Marquette, Ontonagon and Keweenaw counties attached to it, was organized. This section of the country was almost of no value for agricultural purposes, but the indications of rich mineral wealth were evident at every turn. The natural waterway, too, offered great advantages and the necessity of a canal through the Sault to connect the great lakes had been seen and urged upon the people as early as 1837.

The copper range of Ontonagon county was carefully looked into by Dr. Houghton in 1845, and within the next few years mining companies, composed mostly of Boston capitalists, sprang up throughout the county. The first actual copper mining to be done in the upper peninsula, however, was off Keweenaw Point some time before this. In 1846 Ontonagon county was given a separate organization. In the lower peninsula only two counties, Tuscola and Montcalm, were organized during this period, Tuscola being detached in 1845 from Oakland county, and Montcalm in 1850 from Kalamazoo. The census returns of 1850 show a falling off of 486.6 in the percentage of increase, the population of the state being only 397,654, which was an increase of 87.3 per cent over the population of 1840.

Next to agriculture, the lumber industry, the active development of which began about this time, was now attracting the most attention. Its distribution was determined by the rivers and railroads. The first operations of importance were in the Saginaw valley, where a sawmill was in operation in 1837, although, on account of the business depression, nothing of importance was accomplished until 1846. Soon sawmills began to multiply at all accessible ports, and lumber camps appeared on all the tributaries of the Grand, St. Joseph and Saginaw rivers. These smaller streams soon became fairly black with logs floating down to convenient mills, and the wilderness became a veritable hive of industry. The difficulty of navigating the river above Bay City was responsible for the placing of stations below that point. In 1855 Midland county was detached from Saginaw, and by 1857 the citizens of Bay county were demanding a separate organization while Saginaw county was as vigorously objecting to the loss of the head of Saginaw Bay from her domain. Bay county gained her point, however, and was duly organized. Lumbermen were soon working their way into various points along the shore of Lake Huron, and Alpena county was ready for organization in 1857.

The so-called Grand Traverse region was comparatively isolated, being off the regular route of immigration, and therefore little was known about this part of the state.

Late in the forties a few pioneers, lured by the beauty of the scene, formed a little settlement at the head of the bay. This was the beginning of Traverse City. In 1851 Grand Traverse county was organized with Boardman's Mills as the county seat. Newaygo and Marquette counties were also organized the same year, Newaygo representing the lumber interest and Marquette both lumber and the new iron range which had been discovered by Dr. Houghton in 1845. This discovery opened up another large region of the upper peninsula to rapid settlement. A party of Jackson capitalists started a company in 1849 for the mining of iron in the Marquette range, but from lack of transportation facilities none was shipped until 1856, the year after the completion of the Sault canal. The Marquette iron region extends a distance of forty miles from the city of Marquette to L'Anse.

Several fishermen had been attracted to the district around the straits of Mackinac in 1851 and a few of them had remained and become permanent settlers. Soon a little village was started at Harbor Springs and, in 1853, the counties of Emmet and Cheboygan were organized. Two years later the four counties of Gratiot, Oceana, Mason and Manistee were organized, the last three bordering on the lake and valuable for their lumber. In 1855 St. Louis, Ithaca and Alma were platted, and the so-called "graduation act" was passed, whereby the price of land in Gratiot and Isabella counties was reduced to fifty cents per acre for actual settlers, thus preventing speculators from buying up the land. The

result was a rush of immigration into Gratiot and no surplus of provisions to accommodate the large and sudden increase of people. From 1854-60 there was terrible suffering from privation and want and the county was nicknamed "starving Gratiot" in consequence. During this period there were 5,000 people in Gratiot county and no surplus of provisions within fifty miles. Gradually, however, supply and demand found their proper level, the people became comfortable and prosperous and today Gratiot county is considered one of the best counties in the state of Michigan.

Isabella county was opened by a road from Gratiot in 1854 and the next year settlements were made on the site of Mt. Pleasant.

Muskegon, Mecosta and Huron counties were organized the same year, Muskegon being opened by a road to Ravenna connecting with the Grand Rapids road. During this decade, in 1854, the first state census, under the present law, was taken. Of the forty organized counties at that time, twenty-one contained more than 10,000 inhabitants. At the close of the decade the entire population of Michigan was 749,113, an increase of 88.3 per cent over 1850. The time of phenomenal growth for Michigan was over with the financial ruin of the late thirties, and hereafter she was to know only a good, healthy increase.

Keweenaw county was detached from Houghton and given an organization of its own in 1861. A rich portion of the copper belt extends through Keweenaw, and the comparatively easy access to the harbor on the north caused the early miners to consider this their headquarters. In 1863 Menominee county was detached from Delta and organized.

Two counties in the Grand Traverse region, Antrim and Leelanau, were organized in 1863. The settlement of Leelanau county dates back to 1847, when a man in search of health settled at Glen Arbor. The following year a mission was started at Northport and, in 1849, a settlement was made at Elk Rapids. Its growth was very slow however, and not until 1852 was the city laid out. Three years later new and enterprising hands took hold of the old saw-mill and to this fact is due the subsequent advance and success of Leelanau county.

The whole country was now passing through the most terrible experience in its history. The great War of the Rebellion was at its height and Michigan under the able leadership of Austin Blair, was doing her full share for the preservation of the Union. More than 90,000 of her best men took part in the struggle and many thousands died on the field. It was many years after this before the people of Michigan had the heart or courage to do much towards the industrial advancement of their state.

Not until 1869 did Michigan recover herself sufficiently from the ill effects of the war to turn her attention to the building up of the state. In that year five counties, Alcona, Charlevoix, Benzie, Wexford and Osceola, were organized, the last four named being taken from the old county of Michilimackinac. The county of Benzie had been brought to public notice in a peculiar manner in 1854 when a sailing vessel caught in a gale was driven by chance into the mouth of the Betsey river. The captain of the vessel was so delighted with the location that a settlement was made and a postoffice opened in 1860.

The census of 1870 showed a population of 1,184,059, an increase of 58 per cent over the population of 1860.

The splendid pine timber lands in the northern part of the lower peninsula were gradually being opened up by lumbermen and by 1870 Michigan stood at the head of the lumber producing states of the Union. There were few settlers, in the usual sense of the word, in this part of the country, as the tall, bleak pines offered little inducement to immigrants who could go just a little farther west and find all the rich farming country they could possibly wish for. The railroads had not yet opened up this northern country to even comparatively rapid settlement. Extensive lumber operations, however, were opened up in Roscommon, Gladwin and Clare counties in 1871, and in spite of the scarcity of inhabitants the counties of Lake, Missaukee, Kalkaska, Presque Isle and Clare were organized the same year, and Ogemaw, Otsego, Roscommon and Gladwin in 1875. In the latter year Baraga county was detached from Houghton and organized separately. This part of the upper peninsula had been known to explorers from the earliest period and Father Frederick Baraga established a mission station there in 1834.

The last county to be organized during this decade was Crawford county, which was organized in 1879. By 1880 there were 1,636,937 people in Michigan, an increase of 38.2 per cent in ten years. In 1881 Oscoda and Montmorency counties were organized, and Arenac two years later. Schoolcraft county, which had been organized in 1871, although consisting of as rich an agricultural district as any in the southern peninsula, remained a wilderness until ten years ago, when the D. M. & M. railroad passed through. In 1885 Alger county was detached from Schoolcraft and organized by itself, and Iron county was organized from Marquette and Menominee. Two years later Gogebic and Luce counties were organized, Gogebic being taken from Ontonagon, and Luce from Chippewa and Mackinac. The Gogebic iron range and the Colby mine at Bessemer were first opened up in 1883 and Gogebic county, taken from Ontonagon, was organized in 1887.

The organization of Dickinson county, in 1891, from Marquette, Iron and Menominee, forms the last chapter in the history of the organization of counties in Michigan.

The history of Michigan, during the last twenty or more years, is the history of her great agricultural advancement and the development of her great industries.

One of the many thousand present day farm homes in Michigan.

MICHIGAN AGAIN.

It is Modern Michigan, the Michigan of today rather than the Michigan of yesterday, that will be discussed in this publication, but for the purposes of showing by comparison the comforts and advantages to be had today as against those obtainable in the pioneer days of the state and for the purpose of showing the steady growth and development made since the white man first stepped foot upon what is now Michigan, space has been given in the foregoing pages to show briefly the various stages of Michigan's development.

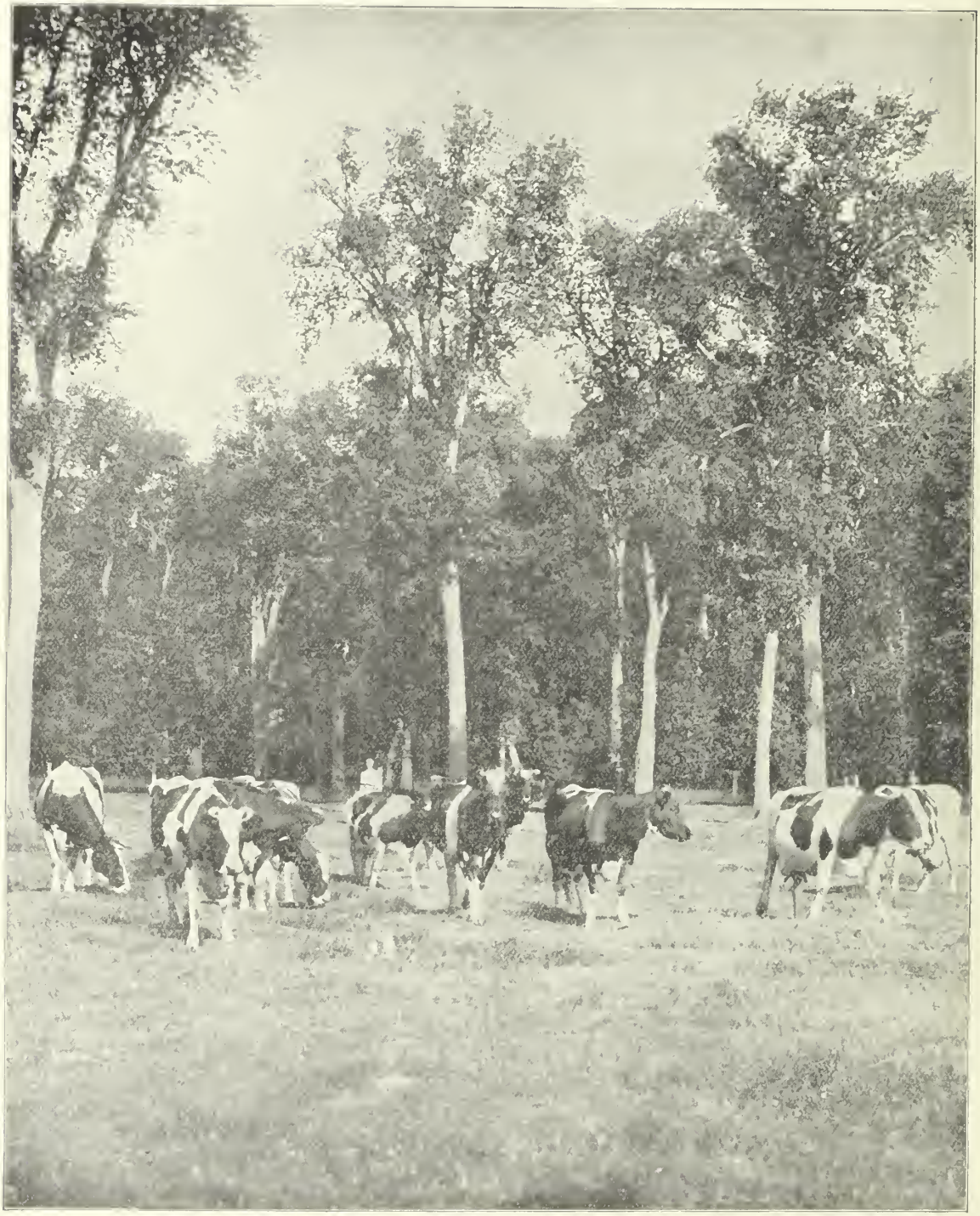
The history of the state of Michigan during more recent years is the history of her great industries. The great pine forests have been gradually cleared away and the woodsman and the axe have slowly but surely been replaced by the husbandman and the plow. The prosperity of Michigan, however, is not dependent upon her pine timber, for in the passing of the lumberman her agricultural resources, the wealth of her mines and the extent of her manufacturing industries are daily giving assurance to even the most pessimistic observer that Michigan is destined to hold for many generations the high place which she has made for herself among the states of the union.

LOCATION, AREA AND POPULATION.

Michigan's place at the head of the St. Lawrence Basin and in line with the Mohawk Valley of New York, and practically surrounded by the Great Lakes, is a most advantageous location. The state has water communication with seven other states and with Ontario, the most populous part of Canada, or altogether with an area having a population of about 30,000,000 people, thus affording an unexcelled market for Michigan products. On the whole, Michigan, by her position and through her resources, has played a leading part in the development of the "Old Northwest" and in turn has shared largely in the $19,000,000 spent by the Federal Government on the harbors and channels on the Great Lakes, and in the cheaper freight rates due to these improvements.

Michigan is not merely a State. She is an Empire containing 36,370,779.62 acres of land, exclusive of water, or about 57,000 square miles. This great area of land forming the two peninsulas is equal to a strip of land more than two and one-third miles wide that would reach around the earth at the equator. Michigan is the largest state in the "Old Northwest" and the largest, except Georgia, east of the Mississippi; is about one-fourth the size of France; of the same area as England and Wales. The Lower Peninsula is nearly equal in size to one of the five states, Ohio, Indiana, Virginia, Kentucky or Tennesee. The Upper peninsula is larger than New England, except Maine, and larger than Delaware and Maryland together.

The population of Michigan (U. S. Government Census of 1909) is 2,810,173.



Raising registered cattle is very profitable in Michigan.

The population of the State in 1900 was 2,420,982 which represents an increase during the last decade of 389,191, or 16 1-10%. In one century, or from 1810 to 1910, Michigan's population has grown from 4,762 to 2,810,173 and now ranks third in the "Old Northwest" group of states, and eighth in the Union. Michigan's population in the last fifty years has been four times that of the first half of the century.

In the division of the State's population of 2,810,173, 52 8-10% live in the rural communities, while 47 2-10%, or nearly half, live in the cities, while in 1900, or ten years previous, 60 7-10% of the total population lived in the rural territory and 39 3-10% lived in the cities. That the manufacturing industries of the state have made wonderful strides in the last decade and that the rural communities have been the losers in a greater or less degree is evident, and one needs only to point to the fact that in the last ten years the cities have increased 37 3-10% while the rural population, comprising the remainder, has increased only 2%, and in many of the best agricultural counties of the state the rural population has greatly fallen off, in some cases as high as 10%.

Sheep grazing on cut over lands.

MICHIGAN IN COMPETITION WITH THE WORLD.

The resources and products of Michigan are so varied in character that it has been said that a fence or wall could be built around the state of Michigan and her people could go on living for centuries without outside assistance. We could house and warm ourselves from our forests and subterranean fuel; clothe and feed ourselves from the products of our flocks, fields and orchards; could build our railroads, telegraph and telephone lines from our own iron and copper mines. Food and recreation could be furnished by our lakes, streams and woods, while our manufacturing industries could supply us with every necessity and luxury, from a clothes pin to an automobile. While Michigan could exist as an isolated empire, with her people enjoying all the reasonable comforts and luxuries of life, with the exception of cotton, which is not produced in this state, she extends a welcoming hand to those from without who would assist in developing and tilling the thousands of acres of available agricultural lands within the state, and a detaining hand to Michigan's sons who would be lured by the strong advertising of the Western states and Northwestern Canada.

"THE QUERY" AND "THE ANSWER."

It is barely possible that in the reading of this publication by some who have not had an opportunity of knowing the true condition of Michigan's development, the question might arise, Why is there such a large area in Michigan still undeveloped, and why, if the undeveloped lands in the state are desirable, have they not been converted into farms that would be producing crops long ago.

Michigan being a timbered state, her development along agricultural lines was necessarily slower than some of her sister states farther west that were of the prairie variety and, consequently, could be developed into farms at less expense than the forest areas of the Wolverine State. This, added to the fact that in the early days there was no market for the forest products of Southern Michigan, and the timber was only cut as fast as the lands could be converted into wheat fields, made the progress of development somewhat slow.

A new settler's second season on the ground.

The lumber industry, which has held the center of the stage in Michigan for so many years has gradually moved northward and its operations have been so complete that there is now comparatively little timber left for further operations. The result of this is that the lumberman is seeking new fields and the men whose fathers and grandfathers spent their lives in the woods and saw mills are now turning their attention to a vocation comparatively new to them, agriculture and the development of the thousands of acres of land left in the passing of the lumberman.

While other states have been advertising their opportunities and possibilities, Michigan has stood still in this respect and permitted the western states and northwestern Canada, not only to take the prospective settler from New York, Ohio and elsewhere, who would make good and become a real asset to the state, but has permitted the taking away of our own men whom we need for the development of our own lands. The railroads too, being interested in the long haul of the settler from the East to the Pacific Coast, have done their part in the development of the West, the result of this being the passing by and through Michigan from the East to the West and the going out of Michigan to the West of thousands of good men who would gladly have come, or remained, in Michigan, and assisted in the development of our lands, had Michigan's opportunities and possibilities only been brought to their attention.

LAKES AND RIVER SYSTEMS.

The Great Lakes.

The lakes of Michigan are as essential to its individuality as the ocean and the North Sea to the British Isles. They are its highway, its fishing ground and its source of supply of almost pure water for city use. They equalize the temperature; furnish a large number of improved harbors and sites for more than a hundred summer resorts.

The total area of the Great Lakes is 94,650 square miles, with Lake Superior, the largest, having an area of 31,200 square miles; Lake Michigan 22,450 square miles; Lake Huron 23,800 square miles; Lake Erie 9,960 square miles and Lake Ontario 7,240 square miles. Lake Superior is 967 square miles larger than Lake Victoria Nyanza, of Central Africa, the next largest fresh water lake on the globe. The water shed of the Great Lakes is nearly twice as large as the Great Lakes, or 174,800 square miles. The Great Lakes furnish the state about 1,600 miles of shore line or one mile of coast to 33 square miles of land surface, and so wrap around the peninsula that no point in the state is more than 85 miles distant from the shore. On these lakes there are 31 government improved natural harbors, six more than have been improved at local expense and more than 100 miles of deep, narrow bays and 150 miles of rivers and straits, most of which are accessible for wharf and dock facilities. The harbors are well distributed in the state as is shown by the fact that there are ninety-one places where the different railroads touch the shore line.

The Great Lakes furnish Michigan with the greatest inland waterway in the world, and in addition to the numerous fleets of passenger boats and car ferries that ply these lakes, their surfaces during most months of the year are literally dotted with freighters and packet vessels carrying Michigan's products not alone to our home markets but to the great markets outside of Michigan which are brought within easy reach by our splendid rail and water transportation facilities.

GREAT LAKES FISHERIES.

Mention should also be made of the extent of the great fisheries afforded Michigan by the Great Lakes. As has been stated, the shore line of the state on the Great Lakes is about 1,600 miles and affords the state a wonderful fishing ground. It is estimated that there are set, all through the fishing season, over 2,500 pond nets with a total length of 500 miles; over 8,000 miles of gill nets, besides a large number of seines and other nets, and that it requires between six and seven thousand men to attend to these nets. The annual catch is about 50,000,000 lbs. A large part of the catch is from Lakes Huron and Michigan. The total value of the fish taken from Michigan waters is about one-twentieth that of the National fisheries. In addition to the Great Lakes, there are more than 5,000 inland lakes, most of which are filled with fish, many of which lakes being highly desirable for summer resorts.

Fish are abundant in the many streams, lakes and rivers of Michigan.

Thousands of lakes and rivers are found in Michigan.

RIVERS.

The peninsular form of the state gives it an unusually large number of streams with relatively short courses. These rivers gather up the brilliantly clear, cold waters of tens of thousands of springs and thousands of lakes and hundreds of square miles of swamp lands, and flow over gravel or sand, through relatively shallow, long and narrow valleys for the most part in winding courses to land-locked bays of the Great Lakes. Apart from the 125 miles of strait-like rivers, Detroit, St. Clair and St. Mary's, the state has only a few miles of streams that are navigable for lake boats. The Saginaw has been deepened at Federal expense to furnish a channel 16 feet deep to Saginaw. The Grand has been improved to furnish a five foot channel to Grand Rapids; the St. Joseph to furnish a four feet channel to Berrien Springs; and the Kalamazoo, Indian River and some others furnish passage for small steamers between certain points, but in a general way, Michigan rivers are naturally adapted for serving as power streams rather than for navigation.

THE DAWNING OF A GREAT WATER POWER ERA IN MICHIGAN.

The water power developed from the streams of the state is about 250,000 horse power, only a small part of the power that might be developed. The larger power streams are as follows: St. Joseph, 20,000 to 30,000 H. P.; Kalamazoo, 7,000 to 10,000 H. P.; Grand River, 10,000 to 12,000 H. P.; Muskegon, 20,000 H. P.; Au Sable, 30,000 to 40,000 H. P.; Huron, 5,000 H. P.; Thunder Bay, 1,600 to 2,000 H. P.; Menominee, 20,000 to 30,000 H. P.; St. Mary's 30,000 to 40,000 H. P. and the Manistee upon which only about 2,000 horse power has yet been developed.

Waiting to be harnessed.

The power in our streams is unlike most other natural resources in that it is not diminished by use, nor is it conserved by non-use. Coal which is not used today remains to be used hereafter, but the energy of water which is allowed to flow on unused neither increases nor conserves the future supply, but is lost forever.

THE MICHIGAN IDEA OF CONSERVATION.

The Michigan idea of conservation is that things are placed here for the use of man and when these things are used for the purpose for which they are best fitted, without waste or unnecessary destruction, all has been done that possibly can be done in the interest of conservation; that in order to conserve some things we must protect

and regulate their use, and in order to conserve other things we must develop them; that there must be a seed-time and that there must be a harvest time, but that no man should be allowed to destroy the seed which is to produce the harvest for the generations that are to follow.

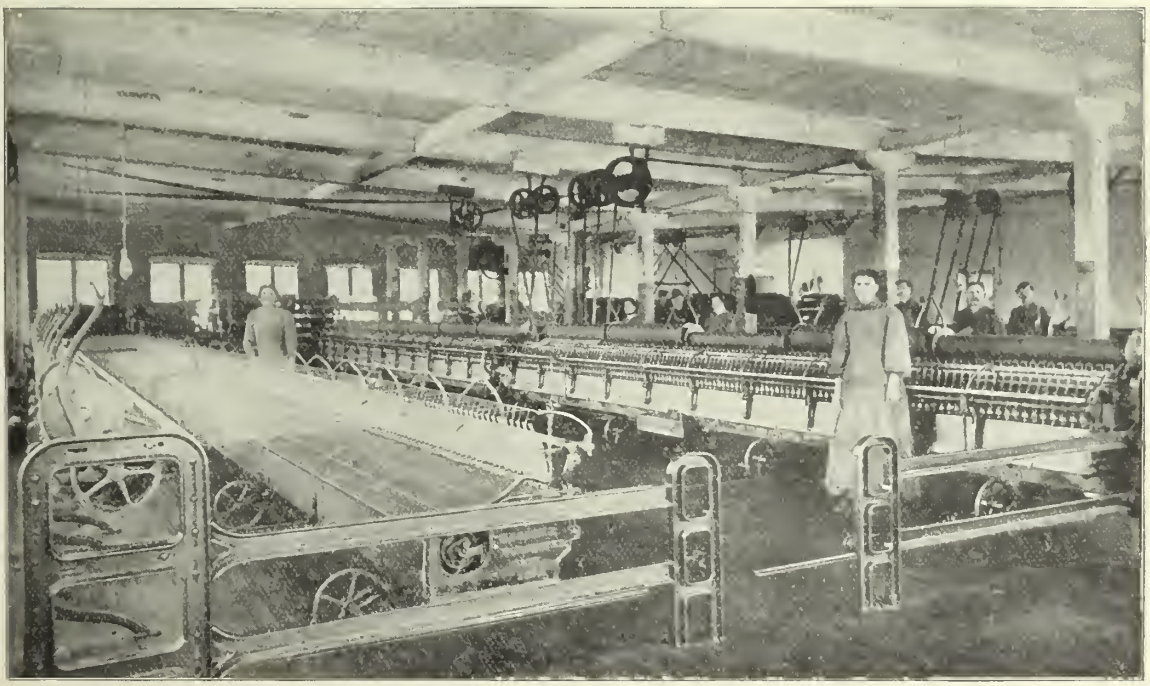
If the Michigan idea of conservation is adhered to, it is not alone possible but altogether probable that the present generation will see the day when many thousand more horse power has been properly developed from the streams of Michigan; when the use of electricity for farm purposes will be as common as the use of the telephone today; when every four corners or crossroads will be illuminated at night; when the incandescent light will take the place of the kerosene lamp in the house of the farmer;

The harnessed streams of Michigan are furnishing light for the farmers' homes and power for all his needs.

when the cares of the housewife will be lightened by electrically driven washing machines, churns, milk separators, etc., and when electrically driven machines will grind the grains of the farm, cut the ensilage for the silo, pump water for the horses and cattle, and in other ways lighten the heavy toil of the farmer by replacing in part farm labor which has grown so difficult to procure.

Electricity produced by water power not only is the cheapest power, but the fact that it can be carried over wires from point to point to an almost unlimited distance, is a very great factor in the building up of cities and towns lying within a reasonable distance and is one of the strongest arguments in favor of its use. The development of Michigan has to a great extent been brought about through the building up of its

The water power at play.



The water power at work.

industrial enterprises. The harnessing of its water power and the promotion of its legitimate enterprises, as well as in the settlement of its agricultural lands, the securing of settlers and the development of its farming industries, are all important factors in the progress of the commonwealth. All are absolutely necessary and must go hand in hand to secure results which the people of the state most desire. The proper development of our water power means cheaper power, and that means more factories. This in turn means larger cities, towns and villages, which furnish and enlarge the home markets for the farmer.

ATTRACTIVE SUMMER RESORTS.

Michigan in the summer time is just one big resort. It is literally the play-ground of hundreds of thousands of people. From all parts of the Middle West and South they flock to the lovely spots with which this enchanted summer land is filled. The Great Lakes furnish sites for more than a hundred summer resorts, which together

A summer cottage.

with many of the more than 5,000 inland lakes are known far and wide as beautiful summer resorts. Hundreds of Michigan's inland lakes are occupied by cottages of the summer resorters who go to them for rest and recreation.

In this way, Michigan's lakes are one of her most valuable resources. Some of them are the haunts of a few fishermen only, while many of the larger resorts, such as Mackinac Island, Grand Island, Lake Gogebic, Petoskey, Charlevoix, Bay View, Macatawa, and St. Clair Flats, Tawas Beach, Higgins Lake and Mullet Lake, and

innumerable other resorts, attract the wealth of the cities. Millions of dollars ($5,000,000 it is estimated) are left in the state annually by pleasure seekers. The inland lakes; the shores of the Great Lakes; trout streams; mineral springs; and woodland, together, form a group of attractions to the rest and pleasure seeker not to be excelled by any other state and at the same time furnish a home market of no small value for the products of the surrounding farms.

Good trout fishing is found in most of the streams in Michigan.

The opportunities for recreation in Michigan are many and varied.

SPLENDID MARKETS.

To the farmer and the homeseeker the question of markets for the products of his fields is of as much importance to him as to the manufacturer. In fact, the question of markets is of first importance. It is not enough that the soil is richly productive, but it is necessary that the crop can be sold in a good market and the market must be close at hand, for, with a large number of the best paying crops, freshness, through early delivery of the product to the consumer, is a matter of importance in determining the prices. Michigan is particularly well situated to meet the demands for the best markets, since she not only has a great home market but is favorably located, being very near the center of population for the entire country. It can be truthfully said that Michigan is, as it were, at the very back door of a consuming population of about 30,000,000 people. The rapid increase of the urban population, devoted to the manufacturing interest, furnish a ready home market. Statistics show that of the total population of the State of nearly 3,000,000 people, nearly one-half live in the cities and towns, therefore the large cities and manufacturing towns hold a great portion of the people of the State, who are, therefore, consumers and must be fed from the products of Michigan's farms. But while the Michigan farmer has a splendid home market for his products, yet the great markets of the State are, as it were, our next door neighbors. By day and by night innumerable steamships ply the Great Lakes, taking from our ports to Chicago, Milwaukee, Racine, Marinette, Greenbay, Manitowoc, Sheboygan, Duluth and other of our neighboring cities on the West, Michigan's products, while the numerous railroads not only enter the lake ports of Wisconsin, Illinois and Minnesota, but the interior points of these states as well. Thus bringing within easy reach such markets as Minneapolis, St. Paul, Kansas City, Omaha and St. Louis and other large cities of the central West. On the South the markets of Indiana and Ohio are but a few hours distance. Indianapolis, Cleveland and Toledo are ready customers for Michigan food supplies. Toledo, Cleveland and Detroit are, so far as Michigan is concerned, great distributing centers to the interior of Ohio and Canada. Buffalo too, is within easy reach and should be a choice market not alone in itself, but as a distributing center for all of southwestern New York, and even New York City is only a few hours distant.

Public market.

EXCELLENT RAIL AND WATER TRANSPORTATION FACILITIES.

The commercial and industrial progress of a country is bound up with its transportation facilities. Just in proportion as the nation, state, city or community increases its transportation facilities for the quick and convenient carriage of people and commodities from one section to another, so will its material prosperity and happiness increase. It is the railroad, steamboat lines and wagon roads which has enabled and is enabling some of the most fertile sections of the country to develop their latent possibilities.

Carferries make through car load shipments an attractive proposition.

It matters not how productive the farm or how great the market unless there is supplied the connecting link, transportation. It would, therefore, seem that in the development of any community, the productiveness of the soil, the markets and transportation facilities are so dependent upon each other that they are almost inseparable and although something has already been said in this publication with reference to Michigan's splendid transportation facilities, there is still more to be said.

WATER TRANSPORTATION.

Michigan has a shoreline of over 1,600 miles on the greatest inland waterway in the world and the more than 50 Michigan ports on this great water highway are served by innumerable steamship lines, that afford unequaled water communication, not alone between Michigan ports but with the ports of several neighboring states and

Freighter leaving Soo Locks.

Canada as well. That the extent of the Great Lakes traffic may be more readily appreciated, reference might be made to the annual tonnage passing through the Soo Locks of the St. Mary's River, connecting Lake Superior with Lake Michigan, and Lake Huron. It is said that the annual tonnage is 2 1–2 times greater than that which passes through the Sucz Canal and seven times greater than that which passes through the Kiel Ship Canal. It is said that about 70% of the freight carried on the Great Lakes annually passes through the Soo Locks, and that in 1910 this amounted to 62,363,000 tons. A lake freighter, with a capacity of 13,000 tons, such as can pass through these Locks, can carry a load that would fill eight trains of 50 cars each,

allowing 30 tons to the car. To carry 62,000,000 tons a year past the Soo would require 2,000,000 cars and it would take something over a month for such a train to pass a given point.

Compare the rates which the Michigan producer enjoys, in the proximity to the great markets, with the necessarily higher rates of the all-rail shipments of the West. The difference represents a good profit to the Michigan farmer and the manufacturer. These advantages of both rail and water transportation will always be one of Michigan's most valuable assets.

STEAM AND ELECTRIC RAILWAYS.

In the matter of railroad transportation, Michigan also is well in the fore ranks. The railroad facilities have been developed so that the State ranks Sixth among all others in the total miles of trackage. From information furnished by the office of the Michigan Railroad Commission, there is shown to be 48 steam-roads, with a total mileage, on the single-track basis, of more than 9,000 miles: twelve of these could be classified as trunk railroad lines, reaching the larger consuming centers. Supplementing these are 36 smaller lines, each serving a territory; not to mention several small private lines which are not common carriers. Of the larger trunk lines of the State one has a mileage of over 1,800 miles—the next greatest mileage is one of nearly 1,300 miles and another about 850; one of a little over 600 and two of over 500 miles. The number of miles of trackage for electric lines in 1913, is given as 1,116.38 miles, of which 1,077.24 miles is the trackage of the 20 interurban lines, exclusive of all city trackage. There are several interurban lines in the course of construction. The electric interurban lines running through the rural communities as they do, has been a boom to the farmer and a factor of no small proportion, in the development of many farming communities. The State has also over 70,000 miles of common highways, of which only brief mention has been made, as the matter of highways is covered in another chapter by the State Highway Commissioner.

DESIRABLE SOCIAL CONDITIONS.

Modern invention and progress have done much to bring the rural communities in touch with all the refining influences of our latter day civilization. The telephone and daily newspapers (the latter made possible by the Rural Free Delivery service) have broken down the barrier of distance, which but a few years ago presented a seemingly insurmountable obstacle, and have brought the Michigan farmer closer to his neighbor; to the big city; and to the great outside world in general. With a literal net-work of wires, consisting of more than 51,000 miles of telephone lines penetrating practically every spot in the state, to say nothing of over 7,500 miles of telegraph lines, no community in the state need be without communication with the outside world.

The Rural Free Delivery of mails is in operation in every one of the eighty-three counties of the state except seven, and as fast as new routes are deemed necessary

Rural mail route

they are established. Figures obtained from the Postoffice Department at Washington, D. C. (February, 1914) show that there are 2,049 individual rural routes in operation in the state, of a total length of over 50,000 miles. The records of the Postoffice Department do not show the length of routes by counties but it is estimated that these routes serve about 225,000 families. Under these conditions it is not necessary for the Michigan farmer to journey miles and wait days to find out what his neighbors are doing; what the conditions of the market are; or what the general agricultural outlook is in the country at large, for through the rural mail service he has his daily papers with the market quotations very nearly as soon as his city neighbors, and if necessary he can step to his telephone the same as the business man of the city and get in touch with the buyers of his own community and also those who would be beyond his reach except for the telephone.

The automobile, too, has become a great factor in bringing the farmer in closer touch with his fellow man, both in his own community and in the nearby cities. The number of farmers now owning automobiles, as compared with a few years ago, is surprising. It is not at all uncommon to see a farmer of today making use of an auto-truck for the transportation of his products, or with his family making a week end automobile trip for rest and recreation. Therefore, with these and many other conveniences that it is now possible for the farmer to have, together with the educational and social advantages to be obtained through the various farmers' organizations, such as the Grange, the Gleaners, the Farmers' Clubs, etc., it can safely be said that in most instances the Michigan farmer today is to be envied by his city neighbors, because it is now possible for him to get a share of the conveniences afforded by the city and at the same t me he has all the joys and pleasures afforded by country life that cannot be obtained by the man living in the city.

The automobile on a Michigan pike.

CHURCHES OF ALL DENOMINATIONS.

The country, the state, the county, or the community, can have no better recommendation than that it is well supplied with churches. Michigan is a christian

state and its people are christian people in the broad sense, and within the state will be found christian churches of practically all denominations. While most of the cities of the state have churches representing many denominations, the smaller towns and country cross roads too afford churches where the people can gather to worhsip God according to the dictates of their own conscience, thus fostering and perpetuating the privilege of religious freedom cherished by the American people since the landing of the Pilgrims.

A rural landscape; Lake in the distance.

MICHIGAN HAS NO RACE PROBLEM.

Michigan has no race problem to face, such as confronts some states of the country in a serious way. Of the total population of the state, 99.1%, or 2,785,247, are whites. Of the total white population, 1,224,841, or 43.6%, are native born whites and of native parentage, while 964,882, or 34.3%, are native whites of foreign or mixed parentage. The population of the rural districts of the state show a greater percentage of native whites than its urban, or city, population. Of the whites of the rural districts, 50.8% are natural born whites, and of the urban, or city, population, 35.5% are native born whites of native parentage. The negroes of the state constitute only .6% of the total population, while the Indian constitutes .3%, and the census of 1910 shows that the number of Chinese and Japanese are still less. The foreign born whites adjust themselves to American conditions speedily and satisfactorily, and the generation emanating from the northern European immigrants, when educated in American schools, have developed into a splendid type of citizens, characterized by their honesty, industry and religious tendencies. The foreign countries which have contributed the largest number of foreign born whites to Michigan's population, as shown by the last U. S. census, are as follows: Canada, 28.7%; Germany, 22.1%; England, 7.2%; Russia, 6.4%; Holland, 5.6%; Finland, 5.2%; Austria, 5.2%; Sweden, 4.4%; Ireland, 3.4%; Italy, 2.8%; all other countries, 9%.

EDUCATION IN MICHIGAN.

BY FRED L. KEELER,

State Supt. of Public Instruction.

In a comparative study of the forty-eight states by the Russell Sage Foundation, Michigan, considered from the various educational standpoints, is accorded a place above the average. The educational conditions are such as to be worthy of considerable pride to the citizens. There is no other public interest in the state to be compared to that of the public schools. President Emeritus Angell of the University of Michigan declares that the people of Michigan have a "veritable passion for education."

From the very beginning of our state life public education has been recognized as a state function. The Ordinance of 1787 set forth the principle, "Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." From this principle there has never been any deviation. Each successive constitution has confirmed it. The provisions have been worked out by educational laws. No state has better provided for her children in the matter of school funds. The primary school fund, provided for in the early history of the territory, has been kept intact for educational purposes. This fund yields an income annually of over five million dollars or about seven dollars per child; in other words, a per capita apportionment of about seven dollars is distributed annually to school districts.

There are over 578,000 boys and girls enrolled in the schools of Michigan; the total expenditures for the past year amounted to more than $16,000,000 or about $29 per child, the increased per capita cost during the last decade being $13.

Other following changes during that period may be noted: The attendance has increased ten per cent. The number of pupils in the eighth grade, exclusive of graded schools, has increased fifty per cent, and the number of eighth grade diplomas granted has doubled. The number of teachers has increased thirty per cent and the salaries have doubled. The estimated value of school property in ungraded and graded districts is over $40,000,000 or nearly double the valuation of ten years ago. The average cost of the schoolhouses built last year was $23,000; that of ten years ago was $4,000. There are 1,500 more school libraries containing about 800,000 more volumes with $110,000 added to their support.

Michigan is justly proud of her University, normal school system, technical institutions and colleges. The city school systems are second to none. The tendency is toward a school system which shall exist for the majority. Both grade and high schools are tending toward more practical training. In no department has there been greater recent improvement than in rural education. A county normal system was established by law in 1903, the sole purpose of which is the training of teachers for

the rural schools. There are this year training elasses in forty-five eounties in the state. More than 5,000 teachers have been graduated from these elasses and today nearly fifty per eent of the rural teaehers of the state have had some normal training.

A system of Standard Sehools has this year been established, the objeet of whieh is to assist in the improvement of the one-room rural sehool. Requirements eoneerning buildings, grounds, equipment, organization and teaehers have been fixed. A sehool meeting these requirements is awarded a diploma and designated a Standard Sehool. The Miehigan Sehoolhouse, a type of a one-room building, is reeommended by the State Superintendent. With the advoeated establishment of a larger administrative unit, the Miehigan rural school system will be unexeelled.

University of Michigan, Ann Arbor.

The State University is located at the eity of Ann Arbor, Washtenaw eounty. Its present organization dates from 1837, although several aets were passed prior to that year for the establishment of a University. It eomprises the Department of Literature, Science and the Arts, the Department of Engineering, the Department of Medieine and Surgery, the Department of Law, the School of Pharmaey, the Homeopathic Medieal College, the College of Dental Surgery and the Graduate Department. Its government is vested in a board of regents eleeted by the people for a term of eight years. The present valuation of its property is $4,672,717.61.

The State Agricultural College is situated on a farm of 684 acres at East Lansing, three miles east of the city of Lansing, Ingham county. It was established in 1855 and its first cost was $56,320.00. It is designed to afford thorough instruction in agriculture, forestry, veterinary science, home economics and mechanic arts, and the natural sciences connected therewith. The control of the institution is vested in the State Board of Agriculture, the members of which are elected from the state at large for a term of six years.

Agricultural building, Michigan Agricultural College, East Lansing.

The Michigan College of Mines is a State Institution, located at Houghton. The object of the college is to educate men to assist in the development of the mineral wealth of the country, in which work it has been eminently successful. It was opened for students first in 1886, and since 1890 it has been one of the largest and most prominent mining schools in the country, its graduates holding prominent positions. It is situated among active mines, mills and smelters, to all of which it has access for the training of its students, and of such facilities it makes constant use. The course of study is eminently practical. For this reason many mature men come to it for instruction. It has ten large and well equipped buildings for use in its technical work. The College of Mines is under charge of a Board of Control consisting of six members appointed by the Governor. Each of the present members of the Board is prominent in the mining industry of the State. Its courses of instruction cover mathematics,

Michigan College of Mines, Houghton

State Normal College, Ypsilanti

physics, chemistry, assaying, metallurgy, drafting, civil, mining, mechanical and electrical engineering, hydraulics, ore dressing, mineralogy, petrography, geology, etc.

The State Normal College, located at Ypsilanti, Washtenaw county, was established in 1849. Its first cost was $25,000, and the present valuation of the property $550,000. The school is under the control of the State Board of Education, the members of which are elected by the people for a term of six years.

Its sole purpose is to furnish competent teachers for the several grades of the state's public schools. Its enrollment is made up chiefly of high school graduates, and numbers annually sixteen hundred in Collegiate Department. For several years the graduating class has averaged about 700, three-fourths of whom have taken the life certificate course. Teachers are prepared to do critic and supervisory work in the grades, for special departments in high and normal schools and for college teaching. The present faculty numbers eighty-eight.

Central Michigan Normal School, Mt. Pleasant.

The Central Michigan Normal School, in charge of the State Board of Education, was started by private enterprise and is located in the city of Mount Pleasant, Isabella county, and consists of a commodious building capable of accommodating 700 students. In 1901, a new training school building and a large addition to the original building were erected. The Legislature of 1905 appropriated $25,000.00 for a central heating and lighting plant. This plant is in operation and has a capacity sufficient to heat and light the present buildings and any building that may

subsequently be erected on the campus. In 1907 the Legislature appropriated $50,000.00 for a physical training building which was completed in 1908. The buildings are situated on a campus of 20 acres of ground. The school was adopted by the state June 3, 1895, and was opened as a state school the following September. Value of grounds, buildings, library, apparatus, etc., $300,000.00.

Western State Normal School, Kalamazoo.

The Western State Normal School, in charge of the State Board of Education, is located at Kalamazoo. The school was opened in 1904. The campus consists of twenty acres and the buildings are complete and up to date. Number of instructors, 50; number of students for the year ending June 30, 1913, 1,450; value of grounds, building, library, etc., $293,000.00.

The Northern State Normal School is located at Marquette, Michigan. The site is beautiful, overlooking Lake Superior. The campus consists of twenty acres, part of which has been laid out in beautiful grounds and part of which has been left in its natural state. The buildings are new, constructed of Marquette sandstone, complete and well equipped. Departments: drawing, English, expression, geography, German and French, Latin, history, kindergarten, mathematics, music, natural science, physical science, physical training, psychology and education, sociology, domestic art and science, training school department. The school was established by Act No. 51 of the Public Acts of 1899. The number of instructors during the

year 1911-1912 was 29; the number of students enrolled 610, and the number of graduates for that year 149. Annual tuition per student is $15.00; average cost of board per week, $4.00; value of grounds, buildings, library, apparatus, etc., $214,575.00. The Legislature of 1911 appropriated $110,000.00 for current expenses for the biennial period.

Northern State Normal School, Marquette.

MICHIGAN'S RURAL HIGHWAYS.

BY FRANK F. ROGERS,

State Highway Commissioner.

Lord Bacon has said: "There be three things which make a nation great and prosperous, a fertile soil, busy work shops, and easy conveyance for man and goods from place to place.

An improved Michigan highway.

If these conditions are necessary to make a nation prosperous, they are equally necessary to the prosperity of a State, and Michigan will not suffer by comparison with other states in these respects.

This State is credited with a land area of about 57,000 square miles or to be more exact 36,370,779.62 acres. In 1910 it had 206,960 farms aggregating 18,940,614 acres which cover 51% or a little more than one-half, of the area of Michigan. Of this farm land 12,832,078 acres, or a little more than two-thirds of the whole, are represented as cleared and more or less under cultivation. These farms are equipped with machinery and stock making a total value, according to the U. S. census of 1910, of $1,088,858,379 which is nearly equal to one-half of the present equalized valuation of the State.

The transportation facilities of Michigan are: 1,620 miles of coast line on the Great Lakes; about 10,000 miles of steam and interurban electric roads and approximately 70,000 miles of public wagon roads outside of the corporate limits of cities and villages. This equals 1.23 miles of highway for each square mile of land area and one mile of highway for each 40 persons, according to the U. S. census of 1910.

At the present time the highways of Michigan are improved by taxes raised from three sources:

1st. A tax levied over the assessable property of each organized township of the State;

2d. By a County road tax, in those counties which have adopted the County Road System, which is levied over the entire taxable property of the County. This includes cities, incorporated villages, farms and personal property. Fifty-four of the 83 counties of Michigan at this time (March, 1914) have adopted and are now working under the County Road System;

3d. By State taxes, through direct appropriations by the legislature, for the

purpose of paying state rewards and otherwise aiding in the building of roads and bridges in the State.

It is probable that fully 95 per cent of these roads are still of earth, but Michigan is now rapidly building more substantial roads on which State bounties are paid. These bounties, or rewards as they are called, for the ordinary road where the metal track is made 9 ft. wide range from $250 to $1,000 per mile, according to the class of road built. Each of these classes of road may receive a 10 per cent additional bonus for each added foot in width of metal track between 9 ft. and 16 ft. Thus the gravel road which draws a reward of $500 a mile for a 9 ft. width of gravel track will draw $850 a mile when the gravel is put on 16 ft. wide and pro rata for intermediate widths. In the same manner the rewards on roads built of macadam, concrete and brick are from $1,000 to $1,700 a mile.

Another Michigan highway.

The last legislature established a Trunk Line Highway System for Michigan comprising some 3,000 miles of main highways which are defined in a general way by naming the cities and towns along the routes. The exact location of these highways between the towns was left to the State Highway Commissioner and local authorities to determine. On the Trunk Line Highways the State reward is twice as much as on the ordinary highways and in addition the State builds all bridges on which the spans are greater than 30 ft. and makes surveys, plans and specifications for both the roads and bridges. At the present writing the State has paid rewards on 2,363 miles of road 43 miles of which are on the Trunk Line. Two Trunk Line bridges have been completed, one in Marquette County and one in Wayne County and bids will be received on April 1st, 1914, for eleven more Trunk Line bridges.

While these State rewarded roads are but a small part of the total mileage of Michigan, they are scattered over 73 counties and reach into 639 townships, which means that more than one-half of the townships in Michigan have a mile or more of these improved roads. The State reward is available to both townships and counties, and the rapidity with which these roads are being built will be realized when it is known that more than enough of these roads were built in 1913 to make two continuous lines reaching from the Ohio line to the Straits of Mackinac.

It will thus be seen that while Michigan has facilities for transportation by water greater than that of any other State and has facilities for transportation by rail equal to most other States of its size and population, it is also making rapid strides in the

improvement of its rural highways. In 1913 more than six and three-quarter millions of dollars were expended on the highways of this State, and, if road-building continues to increase at the present rate, it is safe to predict that within the next decade the main arteries of travel, which carry nearly 90 per cent of the traffic, will be substantially improved and Michigan will assume a prominent place among the States of the Union which are noted for good roads.

Western Michigan Pike. This thoroughfare will extend, when completed, from the southern boundary of the State to the Straits of Mackinac, skirting the shore of Lake Michigan for the greater portion of the distance.

THE GENERAL PHYSIOGRAPHY, SOILS, AND MINERAL RESOURCES OF MICHIGAN.

BY R. C. ALLEN,

State Geologist.

GENERAL PHYSIOGRAPHY.

The State of Michigan comprises two great peninsulas, separating the waters of Lakes Superior, Michigan, Huron and Erie, and about two hundred islands including Isle Royale near the northern coast of Lake Superior and the historic and beautiful Island of Mackinac in the Straits of Mackinac. It has a total land area of about 59,000 square miles. Situated in the heart of the continent, holding within its borders 5,000 sparkling inland lakes, surrounded by the waters of the Great Lakes which are the greatest inland waterways in the world, with a coast line of more than 1,600 miles

Beach of Lake Warren from lakeward side. Buildings stand on the beach, one mile North of Charleston, Sanilac County.

indented with bays and harbors and fringed with islands, Michigan enjoys remarkable commercial and climatic advantages. The commercial advantages are reflected in the fringe of important manufacturing and shipping centers along the lake shores, and the climatic advantages by the variety and specialized character of its agricultural pursuits, as well as by the hundreds of thousands of summer residents and visitors who are welcomed from the less enjoyable summer climates of other states and countries.

The surface of Michigan presents a great variety of forms, most of which have their origin in geologic processes which were attendant on the advance and retreat (some 10,000 to 20,000 years ago) of the last great continental glacier which covered the central continent as far south as the Ohio river. To continental glaciation we are indebted, not only for the Great Lakes themselves, and hence our insular climate, but also for the character and diversity of our land forms, the configuration of the coast, our inland lakes, and our many and varied types of soil. The flat lands or plains which extend from the south east corner of the state northward in a fringing belt around the "Thumb," occupying all of the famous Saginaw Valley, are part of the ancient bottoms of the ancestral Great Lakes. With the exception of these flat lands, and other similar but smaller tracts, the surface of the Southern Peninsula is gently rolling, the undulating plains alternating with belts and irregular tracts of hills. The elevation of the surface rises rather gradually from the lakes inland. The higher lands in the interior are divided by a remarkable broad valley, extending from Saginaw bay via Grand river to Lake Michigan, into a northern highland and a southern highland. The northern highland is an elevated tract of country reaching from Otsego, Montmorency and Alcona counties southwest into Lake, Newaygo and Mecosta counties. The elevation of this tract ranges from 400 to 1,000 feet above Lakes Michigan and Huron. The highest point in Lower Michigan is a few miles southeast of Cadillac in northern Osceola county, where a group of hills reach a height of about 1,100 feet above lake level, or 1,700 feet above the sea. The southeastern highland consists of a much lower and nearly parallel tract extending from southern Huron county southwest through Branch and Hillsdale counties into Indiana and Ohio. Most of this area is from 200 to 600 feet above Lake Huron, the highest portions lying in Hillsdale and Oakland counties where the elevations are at maximum 1,287 feet to over 1,300 feet above sea level.

Bronson Lake, Lapeer County. A typical Moraine Lake.

A rise of 120 feet of the waters of Lakes Huron and Michigan would connect Saginaw bay and Lake Michigan with a strait several miles wide and 50 feet deep. The "mitten," from a vicinity north of Grand Rapids, northeast nearly to Lake Huron, would become a large island with numerous smaller ones around its shores. A broad peninsula, tapering to the northeast, would extend from Indiana and northwestern

Ohio into Tuscola and Sanilac counties. Were the lakes to rise 400 feet the southeastern highland would become merely a group of islands with one large one in Oakland and another in Jackson, Hillsdale and Branch counties.

The Upper Peninsula has a higher western portion, rugged and rocky in many localities, and a much lower and less rugged and rocky eastern one. The height of the interior table-land of the western portion, ranges from 1,000 to 1,200 feet above the lakes or 1,600 to 1,800 feet above sea level, but the rock knobs and hills of drift rise a few hundred feet higher. The highest point in the state, 2,023 feet, is in the Porcupine mountains in Ontonagon county. The eastern portion has a general elevation of only about 250 feet above the lakes, and the highest point is only a little over 400 feet above Lake Michigan. Like Lower Michigan, the Upper Peninsula is cut across by a prominent valley, the bed of a former glacial river, running south from Au Train bay, on the northern shore, to White Fish river and Little Bay de Noc. Were the level of Lake Superior raised 150 feet its waters would flow through this old valley into Lake Michigan.

The state is drained by a number of important rivers. Many of these streams have been of incalculable value as mediums of transportation of logs to the lumber mills, and have determined the location of some of the most important cities of the state. In the future they are destined to furnish an increasing amount of electric power for transmission to villages, cities, industrial centers, and even to the farms. The Raisin, Huron, Saginaw and AuSable are the most important ones of the eastern slope of the Lower Peninsula, and the Manistee, Muskegon, Grand, Kalamazoo and St. Joseph of the western. The Huron and AuSable, rising in the interior highlands, afford a large amount of water power. The Saginaw, the largest river of the peninsula, is navigable to Saginaw, the center of one of the richest agricultural and manufacturing districts of the state, and the Grand to Grand Rapids where water power has been extensively developed.

In the Upper Peninsula the rivers are in general shorter and more rapid, having steeper gradients. The Menominee is the largest river, forming for a great part of its length the boundary between Michigan and Wisconsin. The numerous falls and rapids throughout its course are being rapidly developed for power. The other important rivers are the Escanaba, White Fish, Manistique, Carp, Pine, Tequamenon, Sturgeon and Ontonagon.

SOILS.

Under the limitations of space imposed on this article it will be impossible to give even a brief description of the various types of soil which occur in Michigan. I shall therefore confine my remarks on this subject to a brief statement regarding the proper use of the general soil maps of Michigan which accompany this volume.

These soil maps are the expression of an effort to adapt the results of a careful scientific study and mapping of the surface formations of the state to a distinctly utilitarian purpose. They will be found useful to persons interested in obtaining a knowledge of the character and distribution of the soils in Michigan.

It is known by everyone who has only a slight familiarity with soils that maps which show details of soil composition and texture do not exist and in the very nature of the case cannot be made. There is no limitation of subdivisions that might be made were soils to be classified on the basis of slight differences in physical and chemical composition. On a single section of land there may be found one, two, six, or a dozen different kinds of soil, depending on the basis of classification and the degree of importance attached to minor variations in character. On the maps which accompany this volume there are shown in color and symbol 14 types and sub-types of soil formations. It is believed that this degree of subdivision expresses admirably the general facts. The character and relations of these types and sub-types may be readily understood and the number is not so great as to be confusing to the general reader or layman.

While a single small area of land may show wide variations in soil character, the number of soil types depending, as stated above, on the importance attached to slight variations in character, it is not less true that the same area may have a great predominance of soil of a particular character and composition, depending on origin and manner of formation, and the general soil conditions in such an area could be properly represented on a small scale map by a single color or symbol. The colors and symbols on the soil maps which accompany this volume express *dominance* in the various areas covered by them of a particular soil of the general character set forth in the legend and *not* the entire exclusion of other types. In the mapping of the soil formations it should be understood that no attempt has been made to measure general fertility or the crop growing capacity of the soil formations or particular crop adaptations to particular soils. Soil fertility is a thing which cannot be expressed on a map. Local conditions of temperature, moisture, topography, physical and chemical composition, the property of supporting bacterial life, the character of the sub-soil, etc., are important determinants of crop growing capacity and it follows that this being true, relative crop growing capacity cannot be expressed on a soil map. Particular kinds of soil under certain combinations of the above factors will grow excellent crops of particular kinds when other crops will fail wholly or partially. In these days of specialized farming practically every kind of soil can be managed in such a manner as to grow remunerative crops and soil management is a factor in crop growing of importance equivalent to that of the soil itself.

Vast areas of good agricultural land, mainly in the northern part of the state, await settlement and development. Prospective purchasers of land and prospective settlers should be guided mainly by accurate information regarding local conditions and personal or other trustworthy knowledge of the particular description of land of which purchase is considered, and it should be emphasized that no map and no amount of printed matter can take the place of a personal examination of land on the ground.

MINERAL RESOURCES.

Michigan has claim to a distinctive position in each of the leading industries of the nation, viz., agriculture, manufacture, mining and lumbering. Michigan has

been known as a great mining state since far back in the early forties and fifties when she began the development of her great copper and iron mines, and today no other state produces in such vast quantities such a diversity of mineral products. While Michigan's fame as a mining state rests mainly on her vast deposits of copper and iron ores, she produces in addition a large number of other mineral products, among the more important of which are coal, salt, gypsum, clay, marl, limestone, glass, whetstones and scythestones, gem stones and silver. Prior to 1896 a considerable amount of gold was produced from quartz veins in the vicinity of Ishpeming.

Baltic Mine. A typical Michigan copper mine.

GRAVEL, CLAY AND MARL.

Gravel, clay and marl are found in the glacial drift which is also the universal soil formation of the state. Gravels are becoming more and more valuable for use in road building and road ballast. Marls are used in the production of Portland cement. Marl beds occur in many of the inland lakes of the state and constitute the basis of an important cement industry. Michigan makes more cement from marl than any other state. Many of the most valuable clay deposits occur around the borders of the state in the beds of the extinct glacial Great Lakes which were the predecessors of the present Great Lakes and whose shore lines are found far inland on the present day land surface. These clays form the basis of a brick and tile industry, the value of whose products exceed $2,000,000 annually.

COAL.

The Michigan coal basin occupies about 15,000 square miles of territory in the central part of the Southern Peninsula. Coal beds varying from an inch up, to above seven feet in thickness occur in the upper part of the coal measure series. It has been estimated that there are 8,000,000,000 tons of coal in the Michigan basin, much

of which is available for mining. At the present time the active centers of coal mining are Bay City, Saginaw, St. Charles, and in Genesee county. The value of the coal produced is more than $3,000,000 annually.

SALT, GYPSUM, OIL AND GAS.

Rock salt occurs in the rocks of the Salina series and is produced through a shaft at Detroit. The greater part of the salt production of the state, however, is obtained by the pumping of brines and evaporation with waste fuel from lumber mills or in specially constructed vacuum pans. Salt is produced mainly at Detroit and northward along Lake St. Clair, in the Saginaw Valley, and at Ludington and Manistee. The value of the annual salt products of Michigan is about $2,500,000 which exceeds that of any other state.

Gypsum occurs in the Grand Rapids group of the Carboniferous series and is mined and manufactured into the finished products of commerce mainly at Grand Rapids and Alabaster in Iosco county. The annual production is valued at from $600,000 to $800,000.

Michigan produces small quantities of oil and gas. Many of the farmers in the southeastern part of the state and some other places obtain sufficient natural gas from shallow borings for domestic purposes. It is the belief of many geologists that Michigan may in time become an important producer of oil and gas.

Copper ingots on dock at Houghton.

COPPER.

The copper industry in Michigan began as early as 1845. The mines are located on Keweenaw Point and southwestward in Ontonagon county. Michigan has the distinction of being, all years considered, the largest contributor in metallic copper, of exhibiting the largest copper mining operations, of attaining the lowest cost per ton of ore handled, of exploiting with profit ores of lower grade than are mined else-

where, and of paying larger total dividends than any other mining district in the world. The annual output of refined copper is valued at from $24,000,000 to $40,000,000 depending on the price of the metal.

Copper occurs in native form, mainly in conglomerates and trap beds. The famous Calumet and Hecla copper lode is three miles long and twelve to fifteen feet thick and is mined at a depth of about one mile. From the mines the copper ore is hauled to the mills, most of which are located on the lake. In the mills the copper is separated from the rock, from whence it is sent to the smelters where it is refined and cast into shapes for shipment. Great piles of copper ingots are familiar and characteristic sights on the docks of Torch and Portage Lakes.

Fogarty mine. A typical Michigan iron mine.

There is vastly more copper in the ground in Michigan than has been mined and Michigan will produce copper for many, many years to come. With the gradually declining tenor of the ores, increasing depths of mines, etc., the question with the mining companies relates not so much to exhaustion of the copper deposits as to the margin of profit that the deposits may be forced to yield on exploitation.

IRON.

Iron was discovered in the Lake Superior region in 1844 near Negaunee by Wm. A. Burt, who was in the employ of Dr. Douglass Houghton, the first state geologist of Michigan. For nearly half a century, prior to 1901, Michigan held first place in the production of iron ore. Since that time the production of Minnesota has been much greater than that of Michigan. The main centers of iron mining are Ishpeming and Negaunee on the Marquette Range, Norway, Iron Mountain, Crystal Falls and Iron River on the Menominee Range, and Bessemer, Wakefield and Ironwood on the Gogebic Range.

As old mines are abandoned new mines are started on new discoveries of ore and although Michigan has been mining iron ore for nearly seventy years there still remains in the ground ready for mining almost, if not quite, as much iron ore as has been produced in all preceding years. In other words more ore is developed and discovered each year on the average than is mined that year, and at the present time the outlook is exceedingly encouraging for an indefinitely long and prosperous period of iron mining. Michigan produces normally from 10,000,000 to 13,000,000 tons of iron ore annually valued at $25,000,000 to $33,000,000. It is expected that this production will materially increase in future years.

OTHER MINERAL PRODUCTS.

I have not space to do more than mention the production of gem stones which occur in association with the copper bearing rocks; silver, which is a bi-product of copper smelting; gold, which is known to occur in quartz veins in the vicinity of Ishpeming; building stone and other minor products, nor the pig iron production which is associated with the rapidly growing wood-chemical industry.

The state of Michigan maintains a Department of Geological Survey under the direction of the State Geologist who will on request furnish details of information regarding the mineral resources of Michigan.

THE MICHIGAN CLIMATIC CONDITIONS.

BY C. F. SCHNEIDER,

Director Mich. Section, U. S. Weather Bureau.

The climate of Michigan is insular to a marked degree on account of the influence of the Great Lakes.

The determining factors of climate for any locality are chiefly latitude and the relative distribution of land and water. Other important factors are the topography of its land surface, and the situation of the area in question with relation to the general movement of storm centers.

All of Michigan is situated in a latitude that is conducive to some kind of agriculture, and its comparatively long days and short night during the crop season are not only conducive to crop growth, but they reduce to a minimum, late frosts in spring and early frosts in autumn.

In lower Michigan the longest day of the year in summer is nearly 15½ hours, while at New Orleans the longest day of the year is a little more than 14 hours in length. In Upper Michigan the longest day of the year is nearly 16 hours. The day light promotes all vegetable growth, while the short nights reduce the probability of frosts and also shorten the period of diurnal coolness.

The large bodies of water which make up the Great Lakes have a decided effect in modifying any temperature change sweeping from West to East, either as excessive heat or in the form of excessive cold. This influence is very marked in the immediate vicinity of Lake Michigan, although it is very apparent in all parts of the state. In Wisconsin winter temperatures have frequently continued from 10 to 20 degrees lower during periods of extreme cold weather than in lower Michigan on account of the warming influence of the Great Lake which intervenes between the two. In spring, the influence of all of the Great Lakes and particularly that of Lake Michigan is of untold value in modifying the eastward sweep of early hot waves and late in spring cold waves.

In summer the refreshing southwest and west winds which prevail are making the entire Lake Michigan shore one continuous summer resort.

The topography of Michigan, except in the central portions of the Upper Peninsula is not so marked that it exerts a general influence upon its climate, but it has some features that exert marked local effects. The high lands of Houghton, Baraga, Marquette, Iron and Dickinson counties in the Upper Peninsula. and the elevated portions of Osceola, Wexford, Missaukee, Kalkaska, and Antrim counties in the lower Peninsula are noted for their great snow depths in winter, because the moisture laden westerly winds are deflected upward, and the relatively colder temperature of the high altitude condenses the moisture. The influence of Lake Superior is such as to cause early snows in the Upper Peninsula, so that as a rule the ground

is well proteeted and frost seldom gets into the soil in that part of the state. In the southern part of the state snow is not as plentiful or regular, nor does it come as early in the fall, and it is a usual eondition to have the soil quite heavily frosted during the late fall and early spring.

As eonsidered from an agrieultural standpoint, it may be said that agrieulture in all of its varied forms may be earried on with sueeess when the average yearly

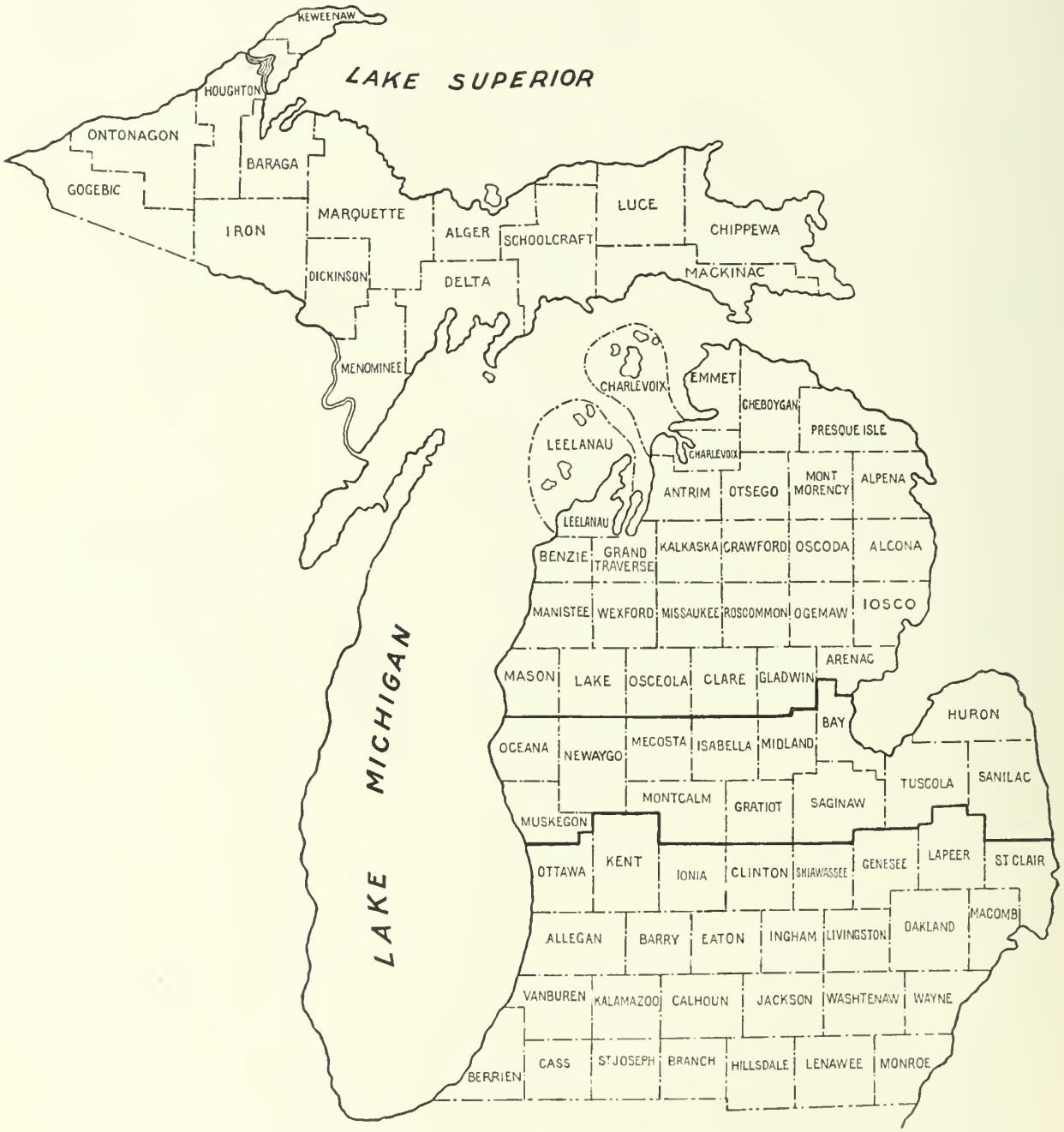


Plate showing the counties in the various sections, viz.: Upper Peninsula, Northern, Central and Southern.

precipitation is well distributed throughout the year, and equals or exceeds about 25 inches.

The entire state of Michigan has an annual precipitation that is very equally distributed throughout the year, as a rule the heaviest occurring during the spring months when it is most needed, of approximately 30 inches. On the other hand, a certain amount of temperature is necessary for agriculture, and here again the state

Plate showing annual mean temperature.

is fortunate, because its crop season is as a rule long enough to mature many of the staple food stuffs and the warmth sufficient to grow them to maturity.

TEMPERATURE.

The mean annual temperature of the lower Peninsula is as a whole about 46 degrees, ranging from 49 degrees in the extreme southwestern part to 42 degrees in the extreme northeasterly portion.

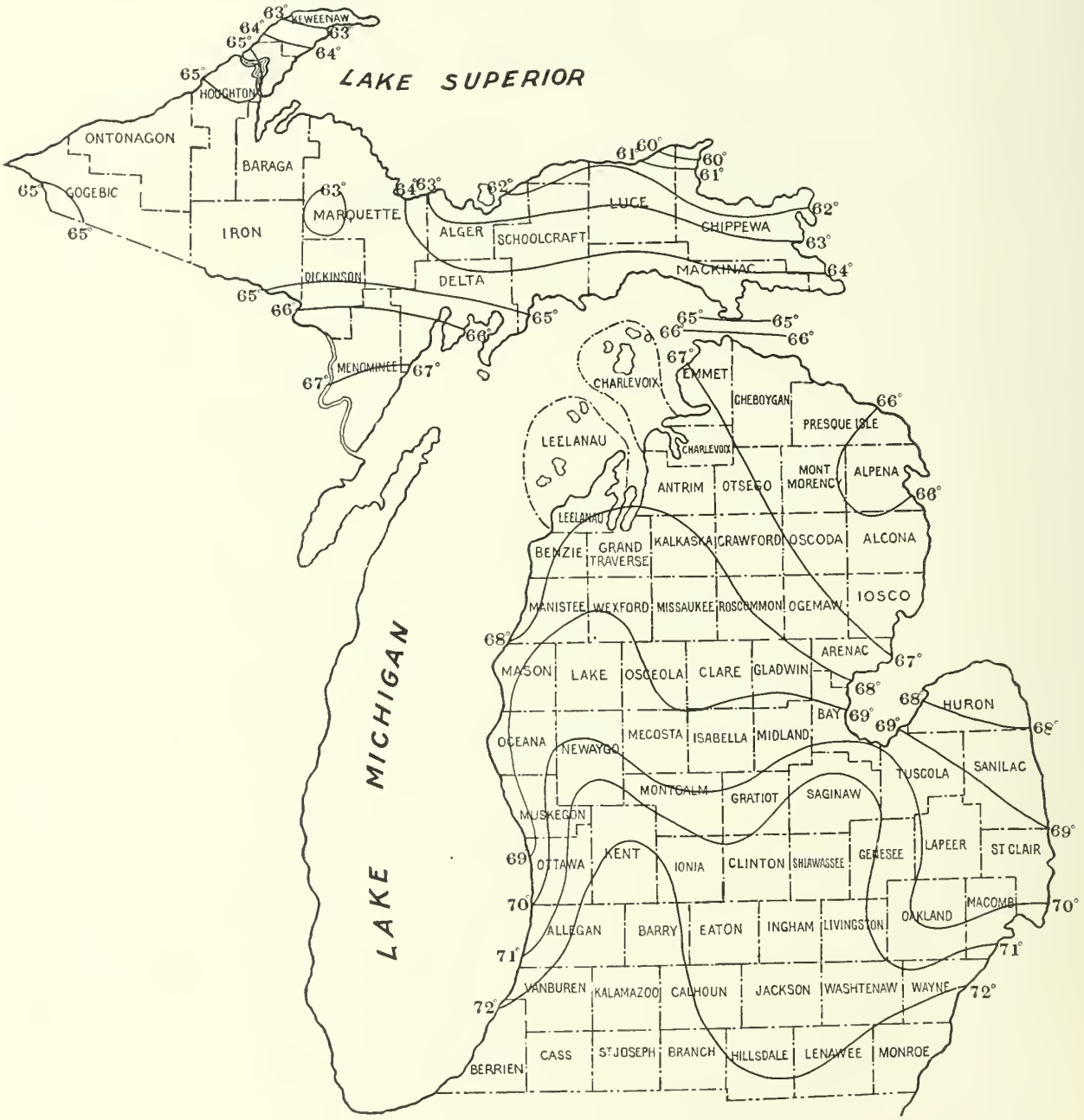


Plate showing July mean temperature.

While in the upper Peninsula the mean annual temperature is 40 degrees, ranging from 43 degrees in the extreme southern portion; to about 39 degrees in the extreme northeast portion; the average maximum or day temperature ranges from about 80 degrees in summer to 25 degrees in winter. The average minimum or night temperature is approximately 55 degrees in summer, and from 8 to 12 degrees in winter. Extreme temperatures of 100 degrees or more are not of frequent occurrence, although

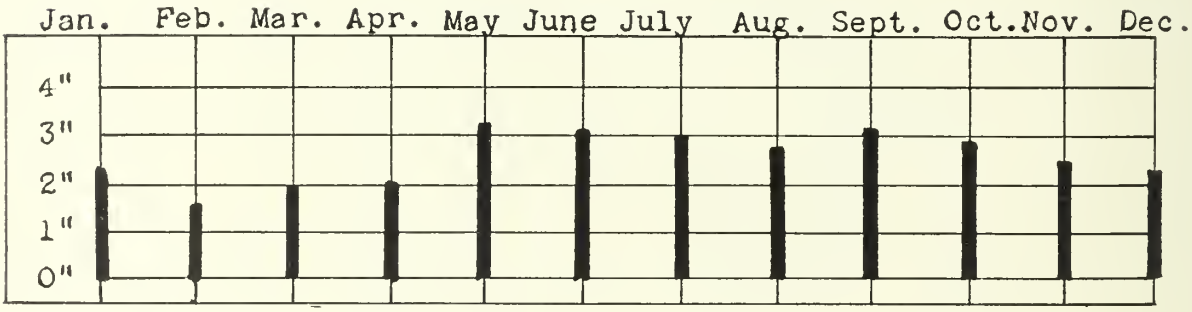
Plate showing January mean temperature.

they have been recorded at some places on one or two days during the majority of summers in the past twenty-five years.

Zero temperatures are an invariable rule during the most months in the winter in the Upper Peninsula and northern half of the lower Peninsula; in the southern half of the lower peninsula zero temperatures usually occur although there have been some winters when there has been an entire absence of zero weather.

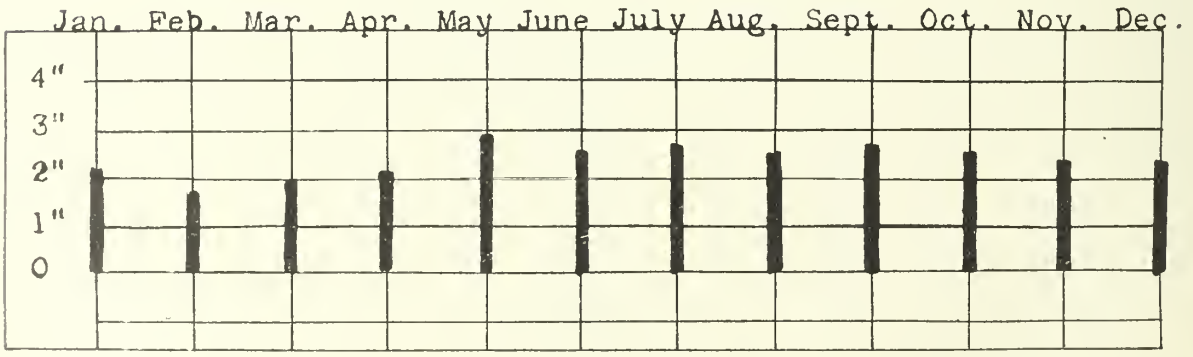
AVERAGE MONTHLY PRECIPITATION.

Upper Peninsula.



AVERAGE MONTHLY PRECIPITATION.

Northern Section.



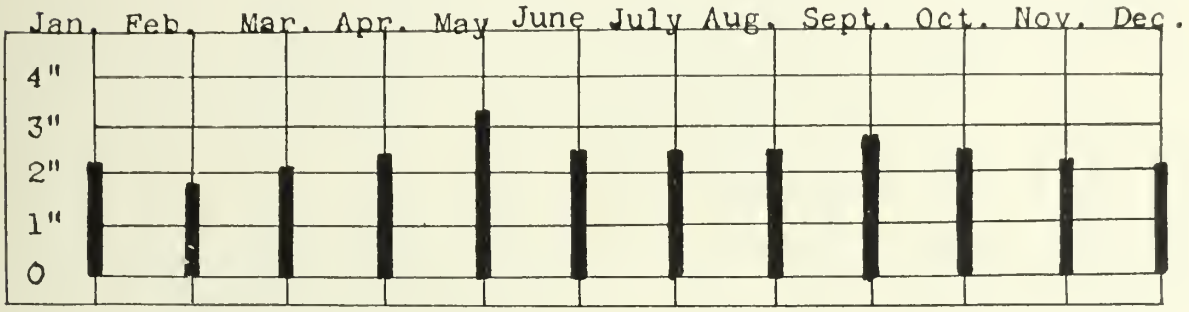
Long heated spells in summer or abnormally protracted cold ones in winter are very unusual. Historical ones occurred in the summers of 1911 and 1913 and during the winter of 1899.

FROST.

As a rule destructive frosts do not occur after May 15th in the spring nor at the very earliest before September 20th, or 25th, in the fall. Over a large part of the southern peninsula frosts do not occur in fall until October 1st. This gives an average of 145 days, or nearly 5 months when in a large portion of the state under average conditions, there will be no destructive frosts.

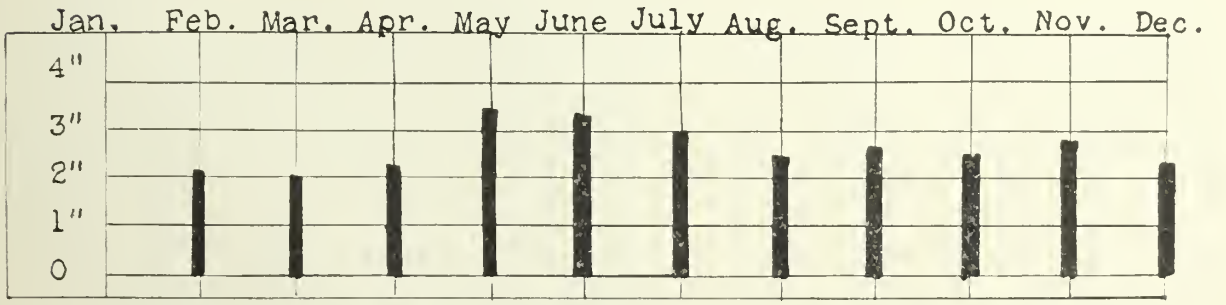
AVERAGE MONTHLY PRECIPITATION.

Central Section.



AVERAGE MONTHLY PRECIPITATION.

Southern Section.



PRECIPITATION.

The precipitation, by which is meant rain and snow, is unusually well distributed throughout the year. Reference to the small charts accompanying this article show that in all parts of the state the precipitation in May is usually the greatest of any

month in the year, and very well suited to the spring plowing, spring germination, and the forwarding of growth of winter wheat, winter rye, meadows, and pastures.

Normally the precipitation is ample and sufficient for all crop needs during the remainder of the growing season, and then diminishes so that the least amount is found to occur in the mid winter months.

Plate showing average annual precipitation.

SNOW.

The average depth of snowfall for all of the various sections of the state can be found in the tables following.

The small outline map of Michigan also shows of what counties the various sections are comprised. It will be noted that snow has never been known to occur in July and August, and rarely in June or September, except in isolated and long apart periods in the Upper Peninsula. The first snow usually occurs in October, increasing in the amount to the end of January, after which there is a decrease in amount which practically ends in April. Light falls are quite usual during May. Nearly 60 inches of snow falls annually in all counties of the Lower Peninsula and something over 70 inches in the Upper Peninsula.

DROUGHT.

Short and irregular periods of drought over limited portions of the state have occurred, but long periods of deficient precipitation are rare. An exact statement of the conditions which actually constitute a severe drought are hard to make because much depends not only in the length of time that there is an absence of rainfall, but on the condition of the soil when deficient periods of rainfall begin, the time of year when the deficiency occurs; and from an agricultural standpoint the texture of the soil and other physical conditions also have a bearing.

Professor Henry in his climatology of the United States notes that the greatest drought this country has ever experienced in the last hundred years, both as to intensity and extent of territory covered, extended over the middle Mississippi, and Missouri valleys, the Lake region, and Atlantic coast districts from early summer of 1894 until about the first of August 1895, the precipitation deficiency being about 10 inches. Since then there has been no real serious droughts in Michigan.

SUNSHINE.

The sunshine annually will average somewhat over 50% of the possible amount, the percentage being much higher during the period extending from May until the middle of October than during the winter months. During December, January, and February it sometimes falls as low as 20% of the possible amount, while during June, July, August and September it exceeds 60 and sometimes 70% of the possible amount. As a rule July is the sunniest month and December is the cloudiest.

WINDS.

The prevailing winds for the greater part of the year are from the west and the average hourly velocity ranges from $12\frac{1}{2}$ miles per hour in March and April to a minimum of about 9 miles per hour in August and September. The wind is mostly from the west and southwest during the first three months of the year and from June to December; quite a large period, but less than a majority of the time during April and May the surface movement of the air is from the east and northeast.

Maximum velocities of short duration ranging from 25 to 40 miles per hour occur during most months of the year and velocities of 60 miles and over are of comparatively rare occurrence. Winds are more variable during the cooler half of the year. At all seasons the southerly winds are usually moist and warm; the northerly winds cold and dry. The easterly winds usually herald unsettled weather and the westerly winds presage fair and settled conditions.

Owing to the fact that the prevailing summer winds are southwesterly, the shore of Lake Michigan from the southern limits of the state northward is much sought for relief during the hot months by people of other states. Water breezes are refreshing especially at night.

CONCLUSION.

Of all of the northern states, Michigan has perhaps the most even or equable climate on account of the dominating influence of the great water bodies which almost surround it. To the farmer, the fruit grower and the gardener the comparatively even temperatures during spring and fall are of untold value. The moisture laden atmosphere induced by the Great Lakes is beneficent to vegetation and stands as a mighty bulwark against the early hot forcing warm waves of early spring and the later cold waves of almost early summer; the Great Lakes and their moisture produce comparatively even temperatures during the warmest summer months and in the fall retard the advance of early cold.

The average or normal amount of precipitation and its distribution throughout the year is ideal for field and orchard operations; its long summer days are conducive to plant growth and the ample sunshine of summer is a valuable aid to all of the many favorable items of climate with which nature has endowed the peninsular state.

GENERAL CLIMATIC DATA.

Upper Peninsula.

Month.	Temperature—Degrees Fahrenheit.									Precipitation in inches.			Number of days.				
	Mean	Mean maximum.	Mean minimum.	Highest.	Year.	Day.	Lowest.	Year.	Day.	Average total.	Greatest in 24 hours.	Total snowfall [unmelted.]	With .01, or more of precipitation.	Clear.	Partly cloudy	Cloudy	Prevailing winds
January...	15.3	22.9	7.6	57	1894	14	—45	1912	6, 7, 12	2.19	2.60	21.3	12	8	6	17	NW
February..	13.2	22.4	4.2	60	1896	27	—49	1899	7	1.65	1.80	16.2	9	9	7	12	NW
March....	22.7	31.6	13.7	83	1910	30	—40	1913	4 & 7	1.99	2.40	13.7	8	12	8	11	NW
April.....	37.7	46.9	28.6	90	1899	26	—16	1909	10	2.13	4.40	5.4	8	12	8	10	NW
May.....	48.8	58.0	38.3	98	1895	20	10	1903									
								*1907	*1 & 4	3.18	3.58	0.5	11	12	8	11	NW
June.....	59.9	70.6	48.5	102	1911	30	12	1897	18	3.03	5.00	T	9	14	8	8	S
July.....	64.3	74.9	53.5	108	1901	15	20	1903	1	2.98	4.35	T	9	15	9	7	W
August....	62.5	72.6	52.5	100	1913	21	25	1904	10	2.85	3.45	0	9	14	9	8	NW
September	56.2	65.9	46.7	99	1906	8	16	1899	13	3.20	4.34	0.1	9	12	8	10	NW
October...	44.5	52.6	36.6	90	1897	1	—3	1905	29	2.77	3.16	2.3	10	10	7	14	NW
November.	31.4	38.0	25.0	78	1903	1 & 3	—17	1897	27	2.47	2.80	12.5	10	7	6	17	NW
December.	21.2	27.7	14.4	58	1889	29	—35	1898	31	2.15	2.42	17.2	11	7	6	18	NW
Average of extremes	39.8	48.7	30.8	108	1901	7–15	—49	1899	2–7	2.55	3.36	74.0	115	132	90	143	NW

GENERAL CLIMATIC DATA.

Northern Section.

Month.	Temperature—Degrees Fahrenheit.									Precipitation in inches.			Number of days.				
	Mean.	Mean maximum.	Mean minimum.	Highest.	Year.	Day.	Lowest.	Year.	Day.	Average total.	Greatest in 24 hours.	Total snowfall [unmelted.]	With .01, or more of precipitation.	Clear.	Partly cloudy.	Cloudy.	Prevailing winds.
January...	20.0	27.5	12.4	59	1908	2	—39	1899	31	2.27	3.20	17.5	10	6	7	18	SW
February..	17.8	26.7	8.8	65	1899	19	—49	1899	11	1.80	3.05	15.1	9	8	8	12	NW
March....	27.4	36.9	17.9	83	1910	29	—35	1890	6	1.97	2.50	9.0	8	12	8	11	NW
April.....	41.1	51.9	30.8	93	1899	29	—11	1911	2	2.13	2.56	3.6	7	12	8	10	NW
May.....	52.3	63.6	40.8	98	1895	29	10	1900	4	2.96	3.50	0.8	9	11	10	10	NW
June.....	63.2	75.2	51.2	106	1887	28	21	1891	5	2.63	4.80	T	7	14	9	7	SW
July.....	67.4	79.4	55.4	103	1901 1910	1 2	25	1898	11	2.71	4.00	0	7	15	10	6	SW
August....	65.2	76.8	53.5	103	1891	8	22	1887	25	2.63	5.87	0	7	14	10	7	SW
September	58.8	70.2	47.7	101	1891	20	15	1894	24	2.83	4.60	T	8	12	9	9	SW
October...	47.0	56.7	37.4	90	1910	6	4	1887	30	2.66	4.00	1.2	8	10	8	13	NW
November.	34.8	42.0	29.6	77	1903 1911	4 12	—6	1895 1904	21 28	2.52	2.40	8.3	9	6	7	17	SW
December.	24.9	31.6	18.2	66	1891	23	—22	1897 1903 1904	24 26 13	2.19	3.92	14.3	10	6	7	18	SW
Aver'ges or extremes..	43.3	53.2	33.6	106	1887	6–28	—49	1899	2–11	29.30	4.80	69.8	99	126	101	138	SW

GENERAL CLIMATIC DATA.

Central Section.

Month.	Temperature—Degrees Fahrenheit.									Precipitation in inches.			Number of days.				
	Mean.	Mean maximum.	Mean minimum.	Highest.	Year.	Day.	Lowest.	Year.	Day.	Average total.	Greatest in 24 hours.	Total snowfall [unmelted.]	With .01, or more of precipitation.	Clear.	Partly cloudy.	Cloudy.	Prevailing winds.
January...	22.2	29.9	14.8	62	1907	10	—31	1893	15	2.26	4.90	12.3	8	6	8	17	SW
February..	20.5	29.3	11.9	64	1900	8	—36	1899	11	1.89	3.35	24.0	7	7	8	13	SW
March....	30.7	40.1	22.0	84	1905	.....	—15	1890	6, 7	2.08	2.70	6.6	7	9	10	12	SW
April.....	43.9	54.6	33.4	90	1899	29, 30	—2	1899	1	2.39	3.00	1.8	7	11	9	10	SW
May.....	55.5	66.7	43.6	96	1911	20	17	1903	1	3.37	4.10	0.2	9	11	11	9	SW
June.....	65.7	77.6	53.4	101	1888	19	25	1907	4	2.67	4.42	0	7	14	10	6	SW
July.....	70.0	81.9	57.5	110	1911	2	31	1900	3	2.65	5.13	0	7	16	11	4	SW
August....	67.5	79.7	55.4	100	1900	5	30	1894	23	2.57	3.53	0	6	15	11	5	SW
September	61.2	72.9	49.4	98	1898	3	19	1893	29	2.79	5.50	T	7	13	10	7	SW
October...	48.8	59.2	38.5	88	1896 1897 1898 1900 1901	27 1 3 5–6 4	10	1887	26	2.64	4.00	0.4	7	11	9	11	SW
November.	36.7	44.6	29.0	77	1888 1911	1 11	—6	1905	21	2.37	3.51	4.2	8	7	8	15	SW
December..	26.9	33.8	20.1	66	1909	5	—18	1895	13	2.10	3.82	9.2	9	5	8	18	SW
Aver'ges or extremes..	45.8	55.8	35.8	110	1911	7–2	—36	1899	2–11	29.78	5.50	58.7	89	125	113	127	SW

GENERAL CLIMATIC DATA.

Southern Section.

Month.	Temperature—Degrees Fahrenheit.									Precipitation in inches.			Number of days.				
	Mean.	Mean maximum.	Mean minimum.	Highest.	Year.	Day.	Lowest.	Year.	Day.	Average total.	Greatest in 24 hours.	Total snowfall [unmelted.]	With .01, or more of precipitation.	Clear.	Partly cloudy.	Cloudy.	Prevailing winds.
January...	23.7	31.1	16.4	70	1906	21	—26	1892	20	2.14	3.55	10.7	10	6	8	17	SW
February..	22.3	30.6	14.2	66	1890	4	—43	1899	12	2.02	2.59	10.7	9	7	8	13	SW
March....	33.1	42.1	24.6	89	1910	27	—14	1900	12	2.25	2.75	6.1	9	9	10	12	SW
April.....	45.6	56.3	35.3	94	1899	21, 28	3	1896	3	2.49	4.36	1.6	9	11	9	10	NW
May.....	57.3	68.1	45.9	100	1895	31	19	1905	1	3.42	5.09	0.2	10	11	11	9	SW
June.....	67.1	74.2	55.7	101	1894	15, 23	29	1897	2	3.37	5.89	0	9	13	11	6	SW
July.....	71.4	82.7	59.5	107	1911	5	32	1898	11	2.96	4.59	0	8	15	11	5	SW
August....	69.2	80.7	57.5	104	1890	3	26	1887	24	2.62	4.96	0	7	15	11	5	SW
September	62.5	73.7	51.3	100	1897	8, 9 13, 14	21	1893 1899	29 30	2.85	4.79	T	8	13	9	8	SW
October...	49.9	60.0	39.8	94	1897	1	4	1906	11	2.43	5.30	0.3	8	12	9	10	SW
November.	37.6	45.4	29.9	78	1895 1901 1909	5 2 1	—5	1891	30	2.72	2.78	4.1	9	7	9	14	SW
December.	27.6	34.5	20.7	66	1895	19	—22	1909	29	2.31	3.66	9.7	10	6	8	17	SW
Averg's or extremes..	47.3	56.6	37.6	107	1911	7–5	—43	1899	2–12	31.58	5.89	43.4	106	125	114	126	SW

Corner of an exhibit at a Michigan County Fair. Root crops never fail.

MICHIGAN AGRICULTURE, ITS PRESENT STATUS AND WONDERFUL POSSIBILITIES.

BY R. A. SHAW,

Dean of Agriculture, Michigan Agricultural College.

INTRODUCTION.

The following data has been prepared with the view of furnishing information in concise form, relating to the agriculture of Michigan, which is but one of five great industries in the State. The data presented, except where otherwise indicated, has been procured from the report of the Thirteenth Census of the United States for the years 1909 and 1910. Comparatively few people have access to the Census reports, which contain such a mass of detailed data, that their common use for reference by individual citizens is not possible. The facts hereafter presented are for the purpose of stimulating a more general and complete appreciation of Michigan, particularly her agricultural industry and the wonderful opportunities open for its development.

AGRICULTURE.

The agriculture of Michigan is notable because of its enormous annual production and the unsurpassed variety of its products. This industry might well be divided into two groups, viz: Agriculture and horticulture, because of the prominence of the latter. The following ratings in agricultural production for the year 1909 have been computed from the Thirteenth Census report, viz:

Plowing on a big scale.

For the total number of animals on farms, Michigan occupied the following rating, viz: Horses 14th, all cattle 15th, dairy cows 10th, swine 19th, sheep 8th, poultry 11th, and for colonies of bees 13th. In making this comparison, it should not be forgotten that the state is pitted against many, the chief business of which is live stock production, and that as later figures will show, in most instances, the rating is raised when expressed in terms of production and values rather than in numbers of animals.

The following list includes Michigan's cereals and other field crops, including the rating of the state among all others from the standpoint of crop valuations for 1909, viz: Corn 15th, wheat 12th, oats 9th, barley 11th, rye 1st, buckwheat 3rd, dry edible beans 1st, dry peas 2nd, grass seeds 6th, flower and vegetable seed 6th, hay and forage 8th, potatoes 4th, (second in yield), vegetables 7th, sugar beets 3rd, chicory 1st, and mint 1st. This long list includes a wide range of products of high utilitarian value, presenting in general a high rating.

AGRICULTURAL LANDS.

In addition to the very favorable place Michigan occupies regarding her industries and agricultural products, there is still great opportunities for development, for as yet only 51.5 per cent of the total land area of Michigan is included in farms, with enormous areas of good land remaining to be reclaimed.

Modern method of working a big farm in Michigan.

Michigan ranks twenty-first in land area among the 48 states of this country, and eighth in population with 2,810,173 inhabitants. This means that the State is only slightly above the average size for the entire number, and is only about one-thirty-sixth larger than Iowa, Illinois, Wisconsin or Florida; fifty-three times larger than Rhode Island, and less than one-fourth the size of Texas.

The gross area of the State of Michigan is about 57,980 square miles, including 500 square miles of water surface. In comparison with this, the combined land areas of England and Wales is 58,575 square miles, with a population of 36,075,269, these figures forming the basis of comparison with a European country.

The approximate land area of Michigan is 36,787,000 acres, and of this amount 18,940,614 acres only are included in farms, while 12,832,078 acres are classified as improved lands. Expressing these facts in the form of percentages, they appear as follows, viz: Extent of land area in farms, 51.5 per cent; per cent of farm land improved, 67.8; and per cent of entire land area of the State improved for agricultural produc-

tion, 34.9. For purposes of comparison, Iowa, one of the richest and most exclusively agricultural states in the country, includes a total of 35,575,040 acres, of which 95 per cent is in farms, with 86 per cent of the farm land in the improved class. In the case of Iowa, therefore, her lands are almost entirely being used for agricultural purposes; she has little, but 5 per cent, of unoccupied land to reclaim and her efforts must be directed toward the improvement of present acquisitions, which is not true of Michigan with 48.5 per cent of her land area not yet included in farms.

Harvesting scene.

MICHIGAN UNIQUE AGRICULTURALLY.

The position of Michigan in relation to her sister states is really unique. Though not a new state, in the sense of those to the westward, there still remains great possibilities for agricultural development in the state, in addition to the improvement of those portions long ago reclaimed. It would be easily possible for citizens of other states, and perhaps some of our own, to assume, that because settlement began at an early date in the state, that all the good land had already been occupied, and that the portion not under cultivation is of little or no use for agricultural purposes. On the contrary, there are no better opportunities offered anywhere today, for investments in farm lands, than in the state of Michigan where prices at present are much lower than in adjacent states where similar soils and conditions exist. The 48.5 per cent of Michigan land, not in farms, is not all sandy or rocky or swampy by any means; there are enormous areas of good land not yet under cultivation.

CONDITIONS UNFAVORABLE TO EARLY DEVELOPMENT.

Among the many questions which arise upon perusal of the foregoing data, probably the most general one is, why have the agricultural possibilities of Michigan not been developed ere this, considering the early date at which the settlement of the country began? As Michigan was originally a timbered area, the development of its agriculture has been slow, which is also true of other states under like conditions. Suitable conditions for crop production did not exist, they had to be produced slowly and laboriously, at the sacrifice of an enormous amount of muscular energy. The rich storehouse of soil fertility was firmly locked by the tenacious grip of the roots

of the oak, maple, beech, basswood, elm, and pines, in fact, by a great variety of both deciduous and coniferous trees. These obstacles had to be removed before crop and live stock production could begin. On the other hand, however, with the extension of numerous great railroad systems into the prairie states to the westward, vast areas were made available to the plow. The simple overturning of the prairie sod produced suitable conditions for the production of corn, wheat, and oats in abundance, which, combined with the great wealth of natural grasses, established conditions for the cheap production of enormous quantities of cereals, meat, milk, and wool, which at once became competitive factors and which have for years pinched Michigan farmers with keenest of competition, forcing a curtailment of agricultural development. This competition has almost become a thing of the past, for the best of the western agricultural lands have been put under cultivation, while the excessive surpluses of farm products are no longer to be feared owing to the rapidity with which consumption is overtaking production, especially within the bounds of our own country.

Threshing scene.

MICHIGAN FARMS AND FARM PROPERTY.

The following data, procured from the last U. S. Census report, gives the values of Michigan farms and farm property in 1910, viz.:

Land	$615,258,348	56.5%
Buildings	285,879,951	26.2%
Implements and machinery	49,916,285	4.6%
Domestic animals, poultry and bees	137,803,795	12.7%
Total	$1,088,858,379	

Of the sum of $1,088,858,379, including the total agricultural valuations of the state, 56.5 per cent represents land values, 26.2 per cent buildings, 12.7 per cent domestic animals, poultry and bees and 4.6 per cent implements.

These enormous valuations, when compared with those of an almost purely agricultural state, such as Iowa, are a trifle under one-third less. We must not however, lose sight of the fact that only 51.5 per cent of Michigan land is now in farms, and that the state has four distinctive industries beside agriculture, the products of our manufactures alone being two and six-tenths times greater than those of Iowa for 1910.

The increase in total value of Michigan farm property during the past decade of the present century amounted to 57.7 per cent, a much greater increase than has occurred any decade since 1870. Even yet, however, Michigan farms are changing hands at figures from 20 to 35 per cent lower than for similar lands in neighboring states to the south and west. The average value per acre of Michigan farm land in 1910 is given as $32.48, eight cents above the average for the entire country.

Farm home in Northern Michigan.

NUMBER OF FARMS.

In 1910 there were 206,960 farms in Michigan, varying in size from 3 acres to 1,000 acres and over. From 1850 to 1880 the number of farms increased at the rate of 3,997 per year, while from this time on to 1900, the increase dropped to 2,463 per year. During the ten years preceding 1910 the annual increase amounted to 370 farms only. The total acreage of farm land improved has risen but slightly since 1900.

AVERAGE ACREAGE PER FARM.

The average acreage of Michigan farms decreased from 128 acres in 1850, to 85.8 acres in 1890, increasing by 1910 to 91.5 acres. The various sizes of Michigan farms are distributed approximately as follows, viz.: 20 acres and under, 7.1 per cent; 20 to 49 acres nearly 25 per cent; 50 to 99 acres about 35 per cent and 100 to 174 acres 25 per cent. Forty, eighty and one hundred and sixty acre tracts comprise five-sixths of the farms of the state. The average size for all farms in the United States in 1910 was 138.1 acres.

Another Michigan farm.

STATUS OF LAND NOT IN FARMS.

The 48.5 per cent of Michigan land not in farms exists largely under the following conditions, viz: (1) As land covered with standing timbers; (2) cut over timber lands; (3) sand areas; and (4) lands as yet unreclaimed by drainage.

The lands of group (1) are held in varying acreages by private parties, companies and corporations, controlling lands in some instances by hundreds of thousands of acres. In most instances these large organizations are interested primarily in timber or mineral resources or both, and are interested in agricultural development only in so far as the final disposal of the land is concerned. The removal of the timber in the commercial production of lumber is rapidly placing on the market lands with good agricultural possibilities. These lands can be reclaimed more economically and satisfactorily if the reclamation begins soon after the timber is first removed; succeeding forest growths make the work more and more difficult as the years go by.

Group (2) includes large areas of so-called cut-over lands in the state, comprising areas of two distinct types, viz.: Those on which hardwoods grew and those producing pines and other conifers. Stump lands upon which hardwood timber grew, if promptly rough-burned and seeded to a mixture of grasses and legumes, and then pastured for a few years until the stumps decay, may be rapidly and cheaply reclaimed for grazing and crop growing.

A larger portion of the lands in the state, comprising group (3) will undoubtedly be utilized than is at present anticipated. For this purpose, fruit growing is being resorted to where the conditions are peculiarly suitable. These very light lands, instead of being farmed intensively in small areas, will some day undoubtedly be operated in large tracts and utilized for grazing purposes, when the proper methods of handling, seeding and improvement are solved, which they surely will be. The sand areas, underlaid with a clay subsoil near the surface, give promise of usefulness for horticultural and crop production, as well as for grazing purposes. Where the sand exists as such without a clay subsoil, as heretofore referred to, the problem of agricultural production is still an unsolved one. It is a great misfortune for Michigan, that some of her pure sand lands have been sold by unscrupulous speculators to city citizens, who have been parted from their savings of years and left without experience or a soil with which to recoup their lost savings. Experienced farmers could not make a living on these types of soils by operating small areas only, and could not be induced to buy them in this way. It is unfortunate that people, particularly those without experience, will persist in buying poor lands without even seeing them or making inquiry of responsible people. It is also equally unfortunate that the laws of our country do not afford protection from the misrepresentations of the dishonest speculator.

It may be said of group (4) that the possibilities of increasing agricultural production, in Michigan, by drainage, are practically equal to the possibilities of increased crop production in the average arid state of the West. The reclaimable, tillable swamp and overflow acreage in Michigan, according to recent estimates of the Bureau of Statistics, amounts to 4,400,000 acres. In respect to the swamp land area, Michi-

gan ranks sixth among the states. In this one reclamation project alone, there are great possibilities in the state. Cooperative effort has already greatly increased the productiveness and value of low-lying farm lands by means of township and county drainage systems. The recovery of Michigan low-lying lands, as far as the work has progressed, demonstrates their unusual value for production because of the peculiarities of their formation and composition, geographical location and peculiarly favorable climatic conditions, resulting in large part from environmental influences, such as contiguity to large bodies of water. Most of these lands, when reclaimed, produce some kinds of farm crops and are adapted particularly to specialized crops of high value, such as garden truck, root crops, peppermint, onions, celry, etc., thus increasing the resources of the state by adding both to variety and wealth.

A prosperous farming section in the Upper Peninsula.

THE UPPER PENINSULA.

The land area of the Upper Peninsula includes 10,682,240 acres, a little less than one-third of the entire state. In 1909 the land area in farms amounted to 913,784 acres of which 340,602 acres were improved. The number of farms at that time was 8,994.

The following interesting data was procured from a report of the Upper Peninsula Development Bureau dated October 15th, 1913, procured largely from supervisors and in some instances township clerks. Their report covers the year beginning May 1st, 1912. During this year the number of families locating on farms in fifteen Upper Peninsula counties was 1,770; acres of land sold for farming purposes 132,360

and timber land sold 337,248 acres. The following fruit trees were planted, viz.: Apples, 88,859, cherries, 16,412; and plums, 8,103. At this time there were 761 schools, of which 45 were organized in 1912; the total school attendance was 52,018. This part of the state included 382 churches. During the year $589,816 was spent on roads, including 1,599¾ miles of gravel and macadam. State roads included 65¼ miles and county roads 597¼ miles.

The opportunities for agricultural development in the counties of the Upper Peninsula of Michigan are very great, indeed. In this area, according to the census report, no county except Menominee has more than 20 per cent of its land in farms. This portion of Michigan will some day be developed into a veritable agricultural empire. Contrary to a somewhat widespread opinion that this part of the state consists of an alternation of rocky wastes and swamps, there is to be found there some of the finest agricultural land in the state. It is a land of great possibilities for the production of legumes, pasture, and root crops, and is, therefore, destined to become a notable dairy district.

Mortgage lifters.

MICHIGAN FARM MORTGAGES NOT BURDENSOME.

Of the total number of farms owned, in whole or in part by the operators in Michigan, including a total of 172,310 in 1910, 51.8 per cent were found to be free from mortgage and 48.2 per cent mortgaged. These percentages do not differ materially from those presented for some of the richest agricultural states in the country, in fact the percentage of mortgaged farms is highest in two of the richest agricultural states in the country.

Corn 13 feet 6 inches high.

This field was full woods in 1907. In 1909 this oat crop was grown, yielding 93 bushels per acre.

The percentage of similarly owned farms mortgaged, in the United States in 1910 was 33.6 per cent. Farm mortgaging should not be regarded as an ill omen, providing the indebtedness has been incurred in a legitimate way from proper motives. It is regrettable when resulting from disastrous crop failures, losses from disease, fire, flood, etc., and is deplorable when resulting from poor management, questionable speculation or dissipation. If, on the other hand, however, reasonable indebtedness is incurred, as a result of land acquirement, equipment, improvement, etc., the act is commendable and stimulates the young man particularly to increased effort and the employment of better business methods. Under these conditions the burden of indebtedness should be carried with the head erect, looking the world square in the face without any trace of shamefacedness. The ratio of mortgage debt to farm value in Michigan is not a burdensome one, being only 30.3 per cent in 1910. It is true that the financial indebtedness may be one of two chief obstacles standing in the way of agricultural improvement, unless the individual is at least an average business man, favored with a series of years of normal crop production. The necessity for a substantial, continuous yearly cash income, to meet interest payments and reduce principal, may prevent the farmer from providing adequate equipment, introducing live stock, establishing the best rotations and employing various other improved systems, which he himself would like to do if he had the means. It is unfortunate that recent methods of land purchase, under the contract system, tempt men to assume far too great financial obligations.

Rye six feet tall.

MICHIGAN NOT A STATE OF RENTED FARMS.

A wrong impression prevails with regard to farm tenure in the state. The last census report gives the following data, viz.: Per cent of farms operated by owners and managers 84.2, tenants 15.8; of the tenant class 10.3 per cent operate on the share and share-cash system, 5.5 per cent including cash and non-specified. In view of the small percentage coming under the purely tenant system the state is not suffering greatly from the evils usually accompanying the practice.

MICHIGAN CROP PRODUCTION.

In 1909 according to the report of the Census Bureau, the total crop area of Michigan was 8,198,578 acres, the products of which were valued at $162,005,000. Of the 12,832,078 acres of improved land in Michigan during the year 63.9 per cent produced crops. (The Census reports contained the number of trees, vines, etc., rather than acreage for orchard fruits, grapes, nuts, etc.)

Nineteen acres produced 675 bushels of wheat.

During 1909 the total area of cereal crops grown in the state was 4, 415,629 acres, producing 121,862,638 bushels, valued at $70,544,250, distributed among the various crops as follows, viz:

	Acres harvested.	Yield bushels.	Value.
Corn	1,589,596	52,906,842	$29,580,929
Oats	1,429,076	43,869,502	18,506,195
Wheat	802,137	16,025,791	16,586,868
Emmer or spelt	6,742	154,103	97,414
Barley	93,065	2,132,101	1,232,344
Buckwheat	75,909	958,119	594,748
Rye	419,020	5,814,394	3,944,616
Kaffir corn	84	1,786	1,136

The above figures are given in detail, being of general interest. With the exception of two of the crop products listed above, the valuations run into the hundreds of thousands of dollars.

CORN, OATS, WHEAT, RYE AND BARLEY.

In order of total acreage and valuation, the leading cereal crops rank as follows in order of importance, viz.: corn, oats, wheat, rye, and barley. Corn included one-third of the total area of all cereal crops for the year and two-fifths of their value; it was reported on 161,901 farms and the corn growing area, hitherto limited to the southern part of the lower peninsula, has gradually worked its way northward, even to the shores of Lake Superior. The acreage of wheat is about half that of corn and includes 2,745 acres of the spring variety and 61 acres of the macaroni. Increased live stock production, with the ensuing application of stable manures and use of suitable crop rotations, will extend, rather than retard wheat production in the state. Michigan is notable for rye production, because of its usefulness in procuring new seedings of clover and other legumes and grasses, and on account of its usefulness for feed and bedding, and also because of its adaptability to the lighter types of soils. Suitable soil and climate conditions would permit of marked extension of the barley growing industry. Oats are reported by 70 per cent of the farms of the state, wheat by 40 per cent, barley by 10 per cent, and rye and beans by about 25 per cent. Southern Michigan soil and climate conditions have proven well suited to buckwheat production; it has a promising future in the state.

Ensilage corn.

OTHER GRAINS AND SEEDS.

The following statement includes the amounts of "Other grains and seeds," produced in Michigan in 1909, viz.: Dry edible beans, 5,282,511 bushels; dry peas, 1,162,403 bushels; clover seed, 138,289 bushels; timothy seed, 10,682 bushels; flax seed, 2,943 bushels; millet seed, 2,226 bushels; peanuts, 1,111 bushels; alfalfa seed, 203 bushels; other tame grass seed 167 bushels; sunflower seed, 40 bushels; and ginseng seed valued at $562. The total value of the products of this class amounts

Red Clawson wheat raised on newly cleared land. Yield 51 bushels per acre.

Abundant crops of hay are the rule in Michigan.

to $12,025,622, of which sum beans alone make up $9,716,315, while dry peas were worth $1,337,430, clover seed $940,488 and timothy seed $19,466. The opportunities for extending the production of seed peas, clover and other legumes within the state are exceptionally great, as the future development of northern lands will add very materially to the products of the southerly portions.

First cutting of alfalfa.

The following table gives Michigan's rating in acreage, production and values:

	Acreage.	Production.	Value.
Corn	20th	14th	15th
Wheat	13	12	12
Oats	10	9	9
Barley	12	11	11
Rye	1	1	1
Buckwheat	3	3	3
Dry edible beans	1	1	1
Dry peas	4	2	2
Grass seeds	..	11	6
Hay and forage	13	13	8
Potatoes	2	2	4
Vegetables	7	..	7
Sugar beets	3	3	3
Chicory	1	1 (pounds)	1
Mint	1	1 (pounds)	1

HAY, FORAGE, SOILING AND ROOT CROPS.

Hay, forage, soiling and root crops (not including sugar beets) are reported from 170,956 farms, including a total area of 2,715,301 acres, producing 3,632,939 tons, valued at $36,040,087. Timothy and clover mixed included 1,625,229 acres, which produced 1,991,618 tons, valued at $21,276,325. Timothy alone stood second, cover-749,563 acres, with a product of 929,165 tons, valued at $10,499,364. Clover alone was third in area with 168,180 acres, the product being 216,862 tons, worth $2,103,819. The other crops in this class include alfalfa, millet, tame and wild grasses, soiling crops, coarse forage and root crops. Since the date of this census the alfalfa area of the state has been extended enormously invading every county of the state. Despite

the fact that Michigan conditions are preeminently adapted, only 770 acres of root crops, other than beets for sugar manufacture, are reported; though corn ensilage may be made to replace root crops in large part for stock feed, it still remains a fact they are not grown nor appreciated by the stockman as they should be.

Michigan ranks 1st in production of beans.

An attractive field of buckwheat.

Michigan ranks second (1913) among all the states in the production of Sugar beets.

SUGAR BEETS.

In 1909 Michigan produced 78,779 acres of sugar beets, yielding 707,639 tons, worth $4,014,123. It is reported that the sugar manufactured from this crop was worth $10,476,876. Michigan has an enormous area of soil suited to sugar beet productions, distributed throughout all parts of the state which, combined with suitable climatic conditions and possibilities of suitable crop rotation, offers splendid opportunity for the extension of the industry.

SUNDRY CROPS.

The value of sundry crops in 1909 was $10,170,284, including Irish and sweet potato, tobacco, hops, broom corn, ginseng root, chicory and peppermint oil. The potato area alone comprised 365,483 acres, yielding 38,243,828 bushels, worth $9,913,778. During this year the state grew 6,292 acres of peppermint, yielding 120,182 pounds of oil, valued at $192,801. Michigan produces about three-fifths of the world's peppermint oil supply and 88 per cent of the total output of this country. In 1909 this state produced 1,584 acres of chicory, amounting to 19,204,000 pounds, valued at $70,020.

The order of Michigan's staple farm crops according to their values for 1909 was as follows, viz.: (1) Hay and forage, $36,040,000; (2) corn, $29,580,029; (3) oats, $18,506,195; (4) wheat, $16,586,868; (5) potatoes, $9,913,778; (6) beans, $9,716,315; (7) sugar beets $4,014,123 and (8) rye, $3,944,616.

(At the left) Guernsey Cattle. (At the right) stock pens.

LIVE STOCK ON MICHIGAN FARMS.

In 1910 the values of domestic animals, poultry and bees on Michigan farms was $137,803,795, an increase of 74.3 per cent over the preceding decade. The percentage of increase in values during this period for the different classes of animals, was as follows, viz.: For horses, 98.6 per cent; cattle, 43.8 per cent; swine, 112 per cent and sheep and lambs, 34.7 per cent. Cattle valuations are only about four-sevenths of those for horses and colts, but the two together represent 80 per cent of the total live stock valuations, swine representing 7.1 per cent; sheep, 7 per cent and poultry, 4.1 per cent. Of the 206,960 farms in Michigan, 196,655 or 95 per cent report domestic animals of some kind.

HORSES.

In 1910 there were 610,033 horses and colts on Michigan farms, valued at $71,312,474. Horses were reported on 89 per cent of the farms in the state, but only 15.6 per cent reported colts foaled in 1909, despite the fact that horses are both scarce and high priced. There is no reason why a farm-work mare, properly fed and handled, cannot produce a good year's work and a strong, vigorous foal at the same time. The climate, soil and crop products of a large portion of Michigan are eminently adapted to the production of heavy horses, for which the market is so willing to pay a premium. Michigan is a purchaser rather than a seller of horses; in this respect she is neglecting a valuable opportunity. At this writing, though we have probably reached the crest of the high wave of horse prices, the indications are that there will be good profits in horse breeding for some time to come. Mules and mule colts are reported from 1,865 Michigan farms, to the number of 3,700, worth $493,825.

BEEF AND DAIRY CATTLE.

Cattle numbering 1,497,823 head, valued at $40,500,318, are reported on 185,081 farms or 89.4 per cent of all farms, though in some cases the stock consisted of one or more cows only for the production of family dairy supplies. At this time there was a total of 767,083 dairy cows, worth $29,312,252. During this year the dairy products of Michigan farms, not including milk and cream for home use, was $26,727,538, rating the state in eighth place. There has been a constant increase in dairy cattle and their products in the state during the past decade and a half. Much improvement has resulted from improved methods of breeding through the greatly extended use of pedigreed sires, including Holstein, Guernsey and Jersey breeds. There never was such a keen demand for dairy cattle as at present, with prices at an unprecedentedly high level. Large areas of the unreclaimed portion of the northern part of the state are eminently adapted for dairy production.

Conditions are ideal for Live Stock and cattle raising in Michigan.

The number of cattle other than dairy cows amounted to 730,740 head, worth $11,188,076. These animals were not all of the beef type, as the classification contained both males and all young stock of both beef and dairy breeds under fifteen months of age. The number of dairy cows given in a preceding paragraph, undoubtedly includes many grade animals largely of beef breeding, such as Shorthorn grades which are at least average milk producers. The conditions confronting the

settler were not favorable to cattle production, for the country was heavily timbered and the grasses growing within the forest shades and along the water courses and swamps were sparse in the former case, and coarse and unnutritious in the latter. The settler was all absorbed in land clearing for crop production and his live stock equipment was meagre, consisting of one or more cows and a few pigs and chickens, to provide meat and milk to meet the family necessities. The pioneer's sacrifices in crop production made him loth to feed to stock, the products of a soil reclaimed at so much personal sacrifice. Pedigreed beef cattle were introduced into Michigan at early dates, Devons in 1840, Shorthorns, 1843; Galloways, 1854; Herefords, 1864 and Aberdeen Angus in 1884. Devons, though numerous at one time, have practically

Michigan has unlimited possibilities as a dairy state.

disappeared. The production of beef flourished in Michigan almost up to the 90's, when the abundant cheap productions of the West became a serious competitive factor, from which the industry has not yet fully recovered. During the interval which elapsed in the transition from beef to dairy production, during the past two decades, there has occurred an indiscriminate admixture of the blood of both beef and dairy breeds, which produced a lack of uniformity in conformation and function that will require years of good breeding to overcome. The proper conditions prevail and indications at present point strongly to a revival of beef production in Michigan, but on an entirely different basis from that originally followed. Alfalfa, clover, corn and ensilage, feeds which have made the dairy of the state are equally well suited

for meat making. During the past two decades educational influences of all classes reaching the farmers, have been busily engaged stimulating dairy production, while the beef growing business has received little or no attention. The opportunities for producing beef, mutton and wool by grazing on the cut over timber lands and lighter soils of the state, will open large possibilities as soon as the proper methods of procedure are generally known.

SWINE.

Swine were reported on 63.6 per cent of Michigan farms in 1910, to the number of 1,245,833 head, valued at $9,755,042. It may be difficult for this state, except for the southerly tiers of counties, to compete on an even basis with the corn belt in the production of lard type hogs. On the other hand, however, with our abundant supplies of dairy by-products, legumes, cereals, corn and root crops, we have conditions eminently adapted to the production of the choicest bacon, an industry as yet scarcely begun.

In subduing the "Wild Lands" great flocks of sheep give material assistance, and return a profit while doing it.

SHEEP.

Sheep and lambs in 1910 numbered 2,306,476 head, valued at $9,646,565, but were reported from only 26.5 per cent of the farms of the state. Michigan has long been famous as a sheep breeding and feeding state, occupying a place in the front rank as regards numbers and values up to the time of the opening up of the western ranges.

As breeding ewes were reported on 54,146 farms, the indications point to the maintenance in fair degree of sheep breeding operations in the older settled portions of the state, despite the large use of western feeding stocks in our fattening pens. Considering the total area of the state available for grazing purposes, and the fact that the sheep thrives on waste materials and by-products, there is still before us great possibility for the development of the sheep industry.

Poultry pays well.

POULTRY.

The number of farms in Michigan in 1910 reporting poultry, amounted to 91.5 per cent, with total valuations of $5,610,958. This sum, representing values of stocks only on farms, amounts to over half the total valuations of sheep or swine, and represents a very valuable asset as the returns from the farm poultry flock are almost clear gain throughout the year, procuring a living largely from what would otherwise be waste material. The total number of fowls raised in the state in 1909, including cities, towns, and villages, was 12,877,537 head, valued at $6,191,440. The egg production for 1909 was 59,915,851 dozens, worth $11,734,799. There is no section of Michigan where the right kind of poultry cannot be made to produce profitably.

BEES.

Michigan is notably a honey producing state. In 1910 bees were reported on 16,892 farms or 8.1 per cent of the whole number. There were 115,274 colonies, valued

at $446,464. In 1909 Michigan produced 2,507,810 pounds of honey and 28,524 pounds of wax, with a total valuation of $296,742 (ranking second). Michigan's tree, crop, wild plant and weed growth is of a character eminently suited for honey production, furnishing an ever changing source of supply throughout the season.

Bees and fruit go well together.

The following rating gives the relative position of Michigan among other states regarding both numbers and valuations of Michigan live stock:

	Ranking numbers.	Value.
Horses on Michigan farms	14	13
Cattle	15	14
Dairy cows	10	9
Swine	19	13
Sheep	8	7
Poultry	11	9
Bees	13 (Colonies)	8

The amount and value of honey and wax produced rates the state first.

The following list includes the numbers and value of domestic animals within the state, but not on Michigan farms and not included in the data heretofore given, viz.:

	Numbers.	Value.
Cattle	47,385	$1,745,203
Horses	100,238	13,660,280
Mules	700	105,514
Asses and Burros	74	6,001
Sheep	6,453	32,231
Goats	2,116	6,128
Swine	13,894	144,986

RURAL ORGANIZATION.

Probably no state in the Union is as extensively organized with rural cooperative agencies as Michigan. The following figures are procured from the 1913 Michigan Farmer's Institute Annual, viz.:

Michigan Farmer's Clubs	118 membership	7,000
Michigan Granges	800 membership	60,000
Michigan Gleaner Arbors	1,015 membership	64,920
Total		131,920

Everyone knows the quality and productiveness of Michigan potatoes.

The influences of all these organizations are extended towards the improvement of religious, social and business conditions, and the effects of the efforts exerted are markedly manifest in any community where one or more of these institutions exists.

The extension service of the Agricultural College is making rapid advances in rural organization, now well represented by cooperative live stock breeders' associations, cow-test associations, experiment Union, alfalfa clubs, and juvenile corn and vegetable growing clubs. Though these efforts may at first be regarded as individual, they, nevertheless, form the pivotal point from which general interests evolve, leading to universal improvement of the state's agricultural conditions.

MICHIGAN OPPORTUNITIES BETTER THAN WESTERN.

Michigan is a good state in which to live comfortably. There may be newer countries in which money might be made more rapidly for a time, but when it comes to the matter of comfortable living, the wide range of natural resources, industries and possibilities for greatly varied production, makes it possible for the farmer in Michigan to provide as many, if not more, of the comforts and luxuries of life, than any state in the Union. The mere acquirement of wealth alone is a sordid and selfish ambition. The desire to establish good homes, surrounded by comfortable living, enjoyed by strong, healthy, intelligent families, is the most worthy purpose in life. The American West has lured many young men away from the Michigan farm, to aid in the development of a country of cheap lands, and become producers of farm products in enormous quantity at low cost, appearing on markets in competition with the Michigan farmer father, increasing in years and declining in strength, while confronted by a labor situation making our sturdiest manhood stagger. As the most productive lands of the west have been developed, the very best opportunities for the young man are to be found within our own state.

STIMULUS TO AGRICULTURE GENERAL.

The conditions which have developed in Michigan make it somewhat more difficult to stimulate agricultural development through educational effort than in a purely agricultural state, because of our great diversity of industries and production in agriculture. Our citizens are not all interested in the same things, but in many things, thus state wide campaigns for agricultural betterment do not attract as in the case of a state where every square yard of land is capable of supporting a hill of corn.

During the past few years, a world-wide movement has developed, tending to stimulate agricultural production. It is a theme which has found a place in the messages and addresses of the country's presidents and of the state's governors, as well. It has been subject to discussion by the greatest railroad magnates, financiers and statesmen. The United States government has supplemented state aid for agricultural betterment with generous appropriations, and private organizations controlling much wealth have given material assistance. The agricultural journals are no longer alone in their efforts, for agriculture has become a favored subject with

the country-town weekly newspaper, the city daily, the metropolitan press, and the most noted weekly and monthly periodicals of the country.

In view of the great stimulus favoring the improvement and extension of agriculture, coupled with the fact that people have long been accustomed to look to the West, which is beginning to approach its limitations, it seems desirable for us to study the great possibilities of the home state of Michigan. It is very doubtful whether the average citizen has an adequate idea of the present status and future possibilities of Michigan agriculture.

A commercial cherry orchard.

HORTICULTURE IN MICHIGAN.

BY H. J. EUSTACE,

Professor of Horticulture, Michigan Agricultural College.

Michigan is preeminently a horticultural state. Its many regions of soil adapted to fruit plant production and the proximity of these regions to large bodies of water and short shipping distances to some of the largest and best markets in the world, attest to its horticultural importance.

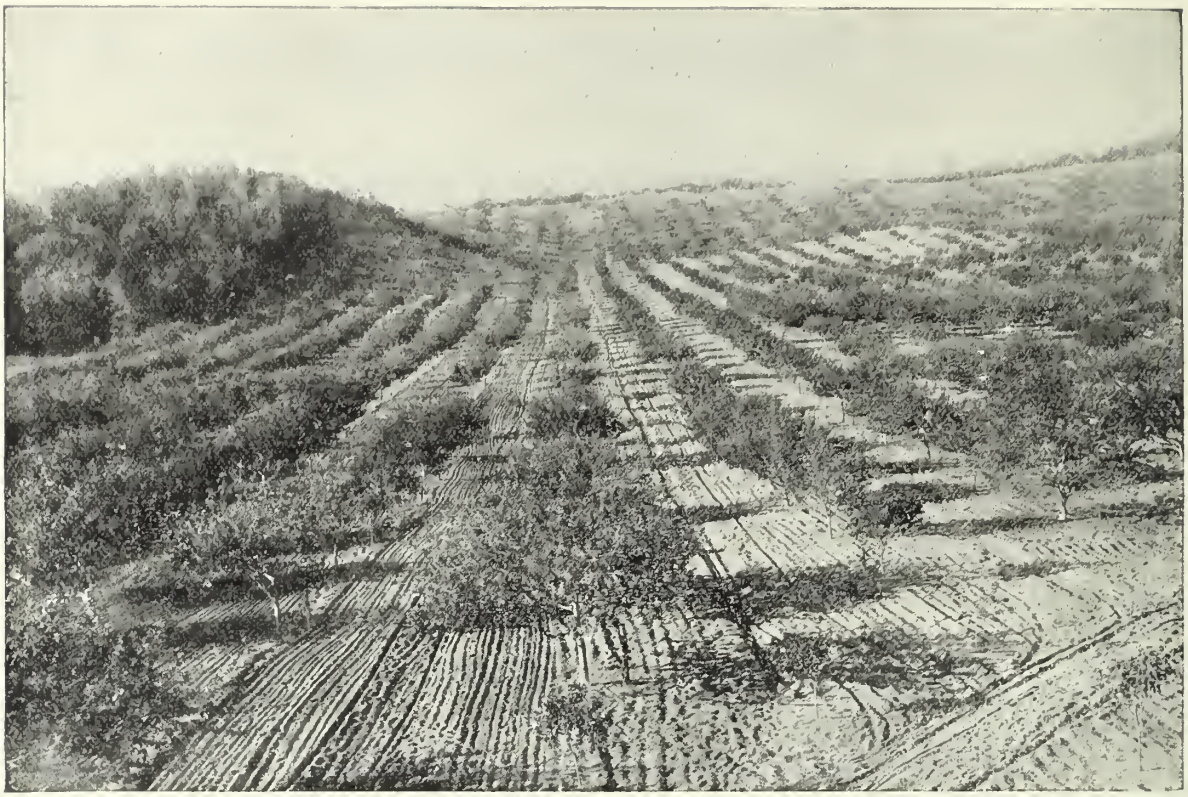
APPLES.

Apples and peaches are the most important commercial fruit crops. The opportunities for the culture of both of these crops are very attractive. In a great many parts of the southern portion of the state are to be found old apple orchards of various size that offer splendid opportunities for men with a limited capital to rent or secure a share basis for a series of years and by applying the modern scientific care and attention, a profit may be realized in a year or two when it would require ten, fifteen or eighteen years to achieve if one had to plant out the trees and wait for them to bear. Frequently this business of renting orchards is carried on while young orchards are being established. In Bulletin 237 of the Michigan Experiment Station may be found the facts and figures on the results that have actually been secured in this work of rejuvenating or improving old orchards.

Apple orchard forty-two years old, and still vigorous.

PEACHES.

Peach growing has, for a great many years, been a very important fruit industry, especially in the western part of the state bordering upon Lake Michigan. The business now requires more skill and ability than it did in the "Bonanza" days, but with intelligent work and good judgment a peach orchard is an excellent piece of farm property. In Special Bulletin 63 of the Michigan Experiment Station is to be found the story of the life history and profit of a young peach orchard that any one who contemplates peach growing should peruse with great care. The details as to starting the orchard and selecting a site are also given in this bulletin.



A fifteen-year-old apple orchard worth $1,500 an acre.

Fruit raising and summer resorting make an ideal combination.

CHERRIES.

Cherry raising is becoming a very large and important fruit industry in certain parts of the state, notably in the Grand Traverse region. Very large orchards are found in that region as well as for some distance south even as far as Oceana County. Very large orchards of both sweet and sour cherries are flourishing; also in certain parts of the Upper Peninsula large orchards have recently been put out. More of the varieties of sour cherries than sweet cherries have been started and the demand for sour cherries from canning factories seem to be inexhaustible. Recent inquiries of some of these factories indicate that they can use a great many more in the future. The sweet cherries demand extra care and skill and the best shipping facilities to handle them properly and their culture should not be attempted by anyone until they have had some experience in fruit growing.

A view of a cherry orchard of forty acres.

PEARS AND PLUMS.

Pears and plums are grown successfully in all the important fruit regions of the state. Some very old pear trees are located in the eastern part of the state. The culture of the pear demands a fairly strong, heavy soil whereas peaches and sour cherries will flourish on the lighter soils and plum and prune culture should be confined to regions where these crops can be transported very quickly after picking.

Bartlett pear orchard.

SMALL FRUITS.

The profits from small fruits are fully equal to those from tree fruits, but as with all fruits, general care and culture is the most important feature that determines the profits of all small fruits and marketing is, undoubtedly, next in importance. The small fruit culture of Michigan has developed so rapidly in the last few years that the last United States Census shows Michigan as ranking 3rd, with all other states in the matter of small fruit acreage and 2nd, in value of small fruit products.

STRAWBERRIES.

This strawberry patch is making the grower rich.

The strawberry is the most important of the small fruits and by many considered the choicest of all small fruits. The strawberry can be grown upon almost any soil that is suitable for corn and potatoes after proper preparation.

Gooseberry patch. The yield under good care is phenomenal.

GOOSEBERRIES.

The second earliest fruit ready for market is the gooseberry. Its market is more limited than that of the strawberry but it is not nearly as perishable and can be picked

and used at various stages of maturity. More of this fruit is being commercialized and preserved every year. The profits are good—sometimes being as high as several hundred dollars per acre.

CURRANTS.

Like the gooseberry, the currant does not require the care that the strawberry does and finds quick and ready market.

RED RASPBERRIES.

Raspberries are an important source of profit to the small fruit grower—the demand is always strong for good fruit used in the fresh state or for canning and preserving.

Other varieties of small fruit that can be raised in Michigan at a profit are Black Raspberries, Purple Raspberries and the Blackberry, which is undoubtedly the most profitable of the brambles—also the dewberry which is too often overlooked by the small fruit grower.

Red raspberries.

CUCUMBERS.

The cucumber crop is one of far more importance in the state of Michigan than it is generally supposed. Some of the largest preserving companies have many salting stations within the state and the culture of the cucumber affords a very attractive field for the beginner in fruit growing. The crop is known as a quick cash crop for the reason that by mid-summer the returns are available and thus money is readily realized from this crop. The culture of cucumbers for pickles does not require expensive outlay for tools and it is a crop that will be very greatly increased in the near future. The Michigan Experiment Station has a good circular No. 19, upon the culture of this crop.

CELERY.

The celery crop in certain regions of the state is world known, notably the Kalamazoo region. This crop is particular about the kind of soil but it does not require expensive tools and one will be able to start in with the culture of this vegetable without very much capital. Full directions are given in Michigan Experiment Station Special Bulletin No. 60.

Celery.

ONION CROP.

The onion crop offers a way to utilize a great deal of the muck lands of Michigan which now can be purchased for a reasonable price and after being put in condition it is demonstrated that they will produce good crops of onions, and will increase in value very rapidly. The expense of growing the crop is not a great one and it will afford work for all of the family. Information is available in Michigan Experiment Station Special Bulletin No. 67.

POTATOES.

The potato is grown in nearly every part of the state and with splendid success. Very definite steps have been taken to increase the quality of the product and to increase the yield by better methods of culture, fertilizers, preventing insects and diseases and superior seed. It is one of the standard crops of the state. Detailed information may be had in Michigan Experiment Station Circular No. 15.

Michigan ranks first in potatoes.

SPECIAL INFORMATION OBTAINABLE.

No settler in the state who is considering the starting of any orchard should do so until he has read and studied very carefully the Michigan Experiment Station Bulletin "Suggestions on Planting Orchards," No. 262. This tells in a very plain and concise way the requirements for soil and site of the orchard and list of varieties that are known to do well in this state is suggested. Similar information for the culture of small fruits is given in Special Bulletin No. 59. From time to time bulletins are issued on spraying and cultivation of horticultural crops and other topics of interest to fruit growers. All of these bulletins are available and will be gladly sent to anyone who applies for them.

HORTICULTURAL PRODUCTION.

The horticultural interests of Michigan have long given the state a position of national importance in these lines of production. In 1910 Michigan ranked eleventh in total number of fruit trees of bearing age, the number being 12,842,827; the products of 1909 amounted to 15,220,104 bushels, rating third, with a total valuation for the year of $9,020,842, also rating third in this respect.

	Trees of bearing age, 1910.	Production, bushels.	Value.
Apples	7,534,343	12,332,296	$5,969,080
Peaches	2,907,343	1,686,586	1,700,330
Pears	1,136,151	666,023	535,771
Plums	464,917	181,188	205,765
Cherries	760,183	338,945	590,829
Grapes (vines)	11,013,576	120,695,997 lbs.	1,531,057

Raspberries that produced 300 cases to the acre.

MICHIGAN'S HORTICULTURAL RATING.

The following data illustrates Michigan's rating among all other states in the country from the standpoint of numbers of bearing trees in 1910 and production and values for 1909:

	No. of bearing trees.	Production, bushels.	Value.
All orchard fruits	10	3	3
Apples	7	2	2
Peaches	11	5	4
Pears	3	3	3
Plums	15	9	8
Cherries	6	4	4
Grapes (vines)	3	3 lbs.	3
Small fruits	3 (acreage)	4 qts.	2
Flowers and plants	8 (acreage)	..	9
Nursery products	12	..	13
Forest products from farms	..	..	10

The crop and horticultural products, heretofore enumerated, are wonderful in their variety and aggregate values, when viewed from the standpoint of a single state. The possibilities of ultimate production in the case of many of these crops has scarcely begun. The 51.5% of land now in Michigan farms can be stimulated to greater production by improving the fertility of the land still further, introducing live stock and by the more general use of suitable rotations, including legumes.

Strawberries that made returns of over $700 per acre.

MICHIGAN'S MANUFACTURING INDUSTRIES.

No state in the Union offers *greater opportunities* to the manufacturer than Michigan. The history of the growth of the manufacturing industries of the state is proof conclusive of the truth of this assertion. While the growth of manufacturing industries has been closely related to the development of the splendid transportation facilities of the state, yet the rapid advance in manufacturers dates back as far as 1825 when the Erie Canal, affording connection with the eastern seaboard, was opened. The transportation facilities of the state at present, both by rail and by water are excellent. With over nine thousand miles of railroad, Michigan is sixth state in the Union in its length of trackage. The state borders on four of the Great Lakes, which furnish splendid intrastate and interstate communication by water. In addition to these splendid rail and water transportation facilities, the state is most fortunately located with reference to the great markets of the country.

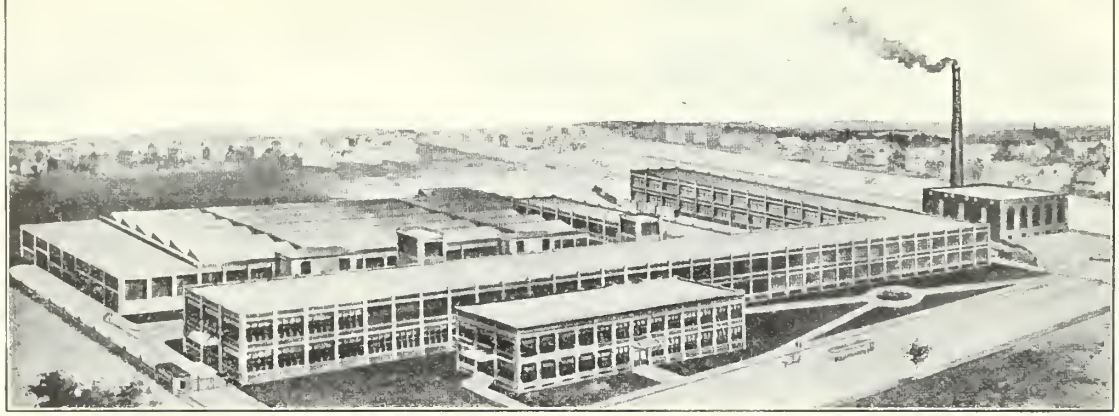
Street scene in Michigan's largest city.

Successful manufacturing industries are the builders of great cities which in turn afford home markets for the products of the farm.

It should be noted that Michigan is located but a short distance from the center of population of the country, thereby giving the state remarkable market advantages. New York, Buffalo and in fact the entire East is a ready and accessible market for Michigan products. Cleveland, Indianapolis, St. Louis and the other cities of the south are within easy reach. Chicago, Milwaukee, St. Paul, Minneapolis and other cities of the West, likewise receive their portion of *made in Michigan* goods. There are, perhaps, two other features that places Michigan in the fore ranks as a manufacturing state. One is the abundance of water-power, afforded by the many rivers and streams, and second, the varied manufacturing industries within its borders.

IMPORTANCE AND GROWTH OF MANUFACTURES.

Michigan has for many years been one of the leading manufacturing states. In 1849 the value of its manufactured products amounted to $11,169,000; by 1869 it had increased to $118,395,000; and in 1909 it amounted to $685,109,000. The early



A group of some of Michigan's large automobile factories.

Statistics show that Michigan now has sixty-three separate and distinct automobile plants.

Another group of large automobile factories in Michigan.

Michigan ranks first in the manufacture of automobiles.

The last census (1910) showed Michigan producing 38.8% of all automobiles manufactured in the United States.

development of manufactures in the state was due largely to the utilization of its extensive forests, while the growing markets afforded by the rapidly developing West, the advantageous situation of the state with respect to the markets of both the East and the West, and its important agricultural and mineral resources have also been influential factors in its later progress.

During 1849 an average of 9,344 wage earners, representing 2.3 per cent of the total population of the state, were employed in manufactures, while in 1909 an average of 231,499 wage earners, or 8.2 per cent of the total population, were so engaged. During this period the gross value of manufactured products per capita of the total population of the state increased from $28 to $244. The proportion which the manufactures of the state represented of the total value of the products of manufacturing industries in the United States increased from 1.1 per cent in 1849 to 2.8 per cent in 1899 and 3.3 per cent in 1909. The growing industrial importance of Michigan is indicated by the fact that in the value of manufactured products it has advanced from seventeenth place among the states of the Union in 1849 to ninth in 1899, eighth in 1904, and *seventh in* 1909.

Street scene in Michigan's second largest city.

In 1909 the state of Michigan had 9,159 manufacturing establishments, which gave employment to an average of 271,071 persons during the year and paid out $153,838,000 in salaries, and wages. Of the persons employed, 231,499 were wage earners. These establishments turned out products to the value of $685,109,000, to produce which materials costing $368,612,000 were utilized. The value added by manufacture was thus $316,497,000, which figure best represents the net wealth created by manufacturing operations during the year.

MANUFACTURES.

Five Leading Industries of Michigan as Measured by Value of Products. 1909.

A large stove factory.

INDUSTRIES.	Value of products.	Per cent of total for all industries in the State.		Per cent of total for the industry in the United States	
		Value of products.	Wage earners average number.	Value of products	Wage earners average number
Automobiles, including bodies and parts	$96,651,451	14.1	11.0	38.8	33.6
Lumber and Timber	61,513,560	9.0	15.4	5.3	5.1
Foundry & Machine shop	45,399,023	6.6	9.4	3.7	4.1
Flour-mill & Grist mill	34,860,803	5.1	0.7	3.9	3.9
Furniture & Refrigerators	28,641,684	4.2	7.2	11.9	12.9

A nest of furniture factories.

AUTOMOBILES.

The manufacture of automobiles in Michigan on any considerable scale commenced in Detroit less than a decade ago, although it had been carried on to a limited extent prior to that time. The industry developed rapidly, and by 1904, Michigan had become the leading state in the manufacture of automobiles, which position it held in 1909. In 1904 Michigan contributed 26.6 per cent of the total value of products for this industry for the country as a whole, while in 1909 the proposition had increased to 38.8 per cent. The total value of products for this industry in Michigan in 1909 was $96,651,000, which was more than twelve times the amount reported for 1904, while the value added by manufacture in 1909 was over nine times that reported in 1904. Of the total value of manufactured products and value added by manufacture for the state in 1909, the automobile industry contributed 14.1 per cent and 13.5 per cent, respectively while of the total increase of $255,989,000 in value of products for all manufacturing industries in the state from 1904 to 1909, $88,654,000, or over one-third, was reported for this one industry.

LUMBER AND TIMBER PRODUCTS.

This industry in Michigan dates from 1834, when the first steam sawmill was built in the Saginaw Valley. Its growth thereafter was very rapid, for in 1849 there were 558 establishments reported, which employed an average of 2,730 wage earners and turned out products valued at $2,464,000. The industry was at first concentrated along the valleys of the Grand, Saginaw, and Muskegon Rivers and their tributaries, and at such lake ports as Alpena, Manistee, Ludington, Cheboygan and Grand Haven. Until the rise of the automobile industry, this was the most important in-

dustry in the state as measured by value of products, and it still continues to lead all others in number of establishments, average number of wage earners, and amount paid in wages. The supply of timber in the state has been declining steadily, and the value of products showed a decrease both from 1889 to 1899 and from 1899 to 1904. Since 1904, however, the industry has shown a slight increase in this respect. In 1909 the total value of products reported for this industry was $61,514,000 and it gave employment to an average of 35,627 wage earners during the year. Until now the cut consisted very largely of white pine, but the depletion of the great white pine forests, which made Michigan at one time the foremost lumber state, has necessitated the utilization of other woods, of which the state has a considerable supply. In 1909 the combined output of softwood formed only a little over one-half of the total cut. Hemlock contributed nearly two-thirds and white pine only about one-fourth of the softwood while small quantities of spruce, cedar, tamarack, and balsam fir were also reported. Maple was by far the most important of the hardwoods, while beech, basswood, birch, elm, and oak constituted most of the remainder. *The state still ranks first in maple and beech.*

FOUNDRY AND MACHINE-SHOP PRODUCTS.

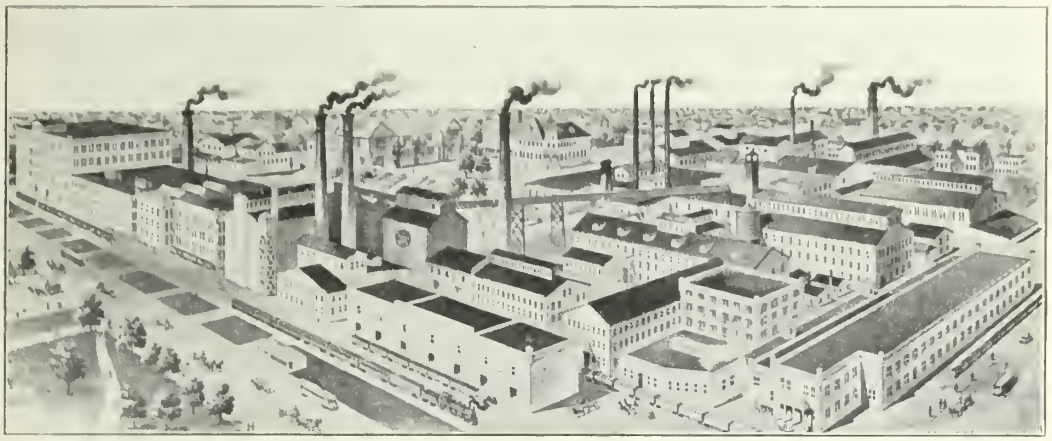
In addition to the general class of foundries and machine shops, this industry also includes establishments which manufactures bells, gas machines and meters, hardware, plumbers' supplies, steam fittings, and structural iron-work. The industry was really of greater importance in the state than is indicated by the statistics, as some machine shops manufactured a distinctive product and were assigned to other classifications. A number of the most important establishments were engaged in the manufacture of cast-iron radiators and boilers for steam cranes and pile drivers. The gross value of products increased from $25,430,000 in 1899 to $45,399,000 in 1909, or 78.5 per cent for the decade.

FOOD AND KINDRED PRODUCTS.

This group of industries in Michigan includes seven industries, namely: flour mills and grist mills; the butter, cheese, and condensed milk industry; slaughtering and meat packing; the manufacture of food preparations; bakeries; the beet sugar industry; and canning and preserving. The classification, "Food preparations," includes the statistics for the factories which manufacture fancy cereals, mincemeat canned soups, and similar preparations as chief products. The canning and preserving industry embraces all establishments in which fruit, vegetables, and fish are canned or preserved, as well as those which prepare pickles, preserves, and sauces. In 1909 there were 1,980 establishments reported for these seven industries, which employed 10,978 wage earners and manufactured products valued at $100,605,000, adding $26,480,000 to the cost of materials by the process of manufacture. This group of industries, however, is of much less importance relatively when measured by value added by manufacture or average number of wage earners than when measured by value of products, owing principally to the comparatively simple processes involved

in the manufacture of flour-mill and grist-mill products, and butter, cheese and condensed milk, and in slaughtering and meat packing. Each of these seven industries showed a noteworthy increase in value of products during the decade, the largest percentage of gain being that of 55.4 in the beet-sugar industry and the smallest that of 61.1 in the flour-mill and grist-mill industry.

(Michigan ranks second among all states in manufacture of food products.)



Two large food factories in Michigan.

FURNITURE AND REFRIGERATORS.

Michigan was the second state in the Union in the manufacture of furniture and refrigerators in 1909, and first in the manufacture of refrigerators alone. Of the 202 establishments included in this classification in 1909, only 10 were primarily engaged in the manufacture of refrigerators, the value of the output of these establishments constituting about one-twelfth of the total value of products reported for the industry. The importance of the industry in the state is no doubt due largely to the abundant available supply of pine and hardwood suitable for these purposes. While the supply of such woods in the state has diminished in late years, the quantity of high grade lumber imported has increased largely, and the industry in the state has maintained the impetus afforded by its early natural advantages and continued to prosper, as indicated by the fact that the average number of wage earners employed increased from 12,833 to 16,610, or 29.4 per cent, and the value of the products from $16,040,000 to $28,642,000 or 78.6 per cent, during the decade. The value of the

products of the furniture and refrigerator industry in Michigan equaled nearly 12 per cent of the total value for the industry in the entire United States.

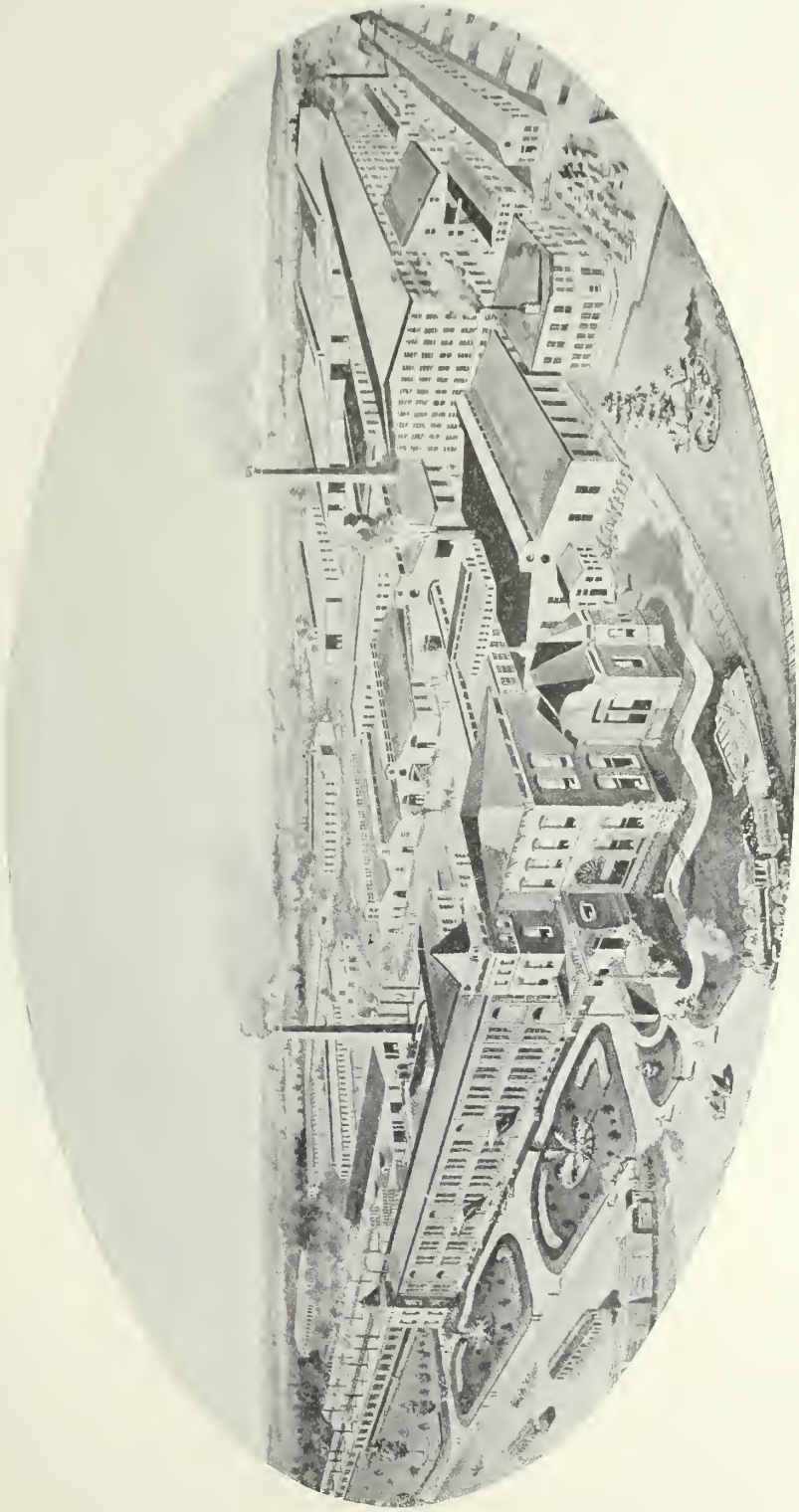
A furniture exposition building.

Michigan ranks second among all states in manufacture of furniture.

MANUFACTURES.

Industries in which Michigan Ranked First—Second—Third, as measured by value of products. 1909.

FIRST. Industry.	State's percentage total value of products for U. S.	SECOND. Industry.	State's percentage total value of products for U. S.	THIRD. Industry.	State's percentage total value of products for U. S.
Automobiles, including bodies and parts	38.8	Basket, ratan and willow ware	8.4	Beet sugar	21.8
Charcoal	29.6	Billiard tables and materials	(1)	Brass and Bronze products	9.3
Oil, essential	28.0	Cash registers and calculating machines	(1)	Corsets	13.1
Salt	32.2	Food preparations	9.2	Flags, banners, regalia, society badges and emblems	(1)
Show cases	26.0	Furniture and refrigerators	11.9	Fur goods	4.1
Wheelbarrows	(1)	Graphite and Graphite refining	(1)	Springs, steel car and carriage	14.5
		Grindstones	(1)	Stoves and furnaces, including gas and oil stoves	11.6
		Patent medicines and compounds and druggists' preparations	9.5	Window shades and fixtures	7.0
		Vinegar and cider	11.5	Wood distillation, not including turpentine and rosin	24.6
		Wall plaster	11.1		
		Wirework, including wire rope and cable	12.6		



Large threshing machine manufacturing plant.

A FEW OTHER IMPORTANT MANUFACTURING INDUSTRIES.

THE BEET SUGAR INDUSTRY of Michigan has had a tremendous growth. The quantity of beets used in the several large beet sugar factories within the state increased from 205,925 tons in 1899 to 816,609 tons in 1909. The total value of granulated sugar products in 1909 was $9,756,587. The total value of all other products, including granulated sugar, molasses, sirup, pulp, and other by-products of the industry, was $10,476,876 as against $1,602,266, ten years previous. The last census of the United States show Michigan in 1909 as ranking third with all other states in the Union in the beet sugar industry. The latest available figures indicate that the state has taken second place.

One of Michigan's many large beet sugar factories.

PRINTING AND PUBLISHING. This industry includes the printing and publishing of newspapers, periodicals, books, music—bookbinding and making—lithographing and engraving, etc. In the number of establishments, this industry ranks second in the state, having a very decided growth during the last decade, the value of its product increasing $9,142,000 or 111.4 per cent.

TOBACCO MANUFACTURES. This industry covers the manufacture of cigars, cigarettes, chewing and smoking tobacco and snuff. The total value of products produced from this industry in 1909 was $16,179,000, which was a gain of $6,934,000 or approximately 75 per cent for the last decade.

LEATHER GOODS. The real development of this industry has taken place since 1889 but in 1849 the state reported 61 establishments which employed 283 wage earners and turned out products valued at $402,000. In 1909 there were 24 plants reported, which employed 2,291 wage earners, the value of whose products totaled $15,331,000.

PAPER AND WOOD PULP. The development of this industry in Michigan has been due to the more extensive use of wood pulp in the manufacture of paper. In

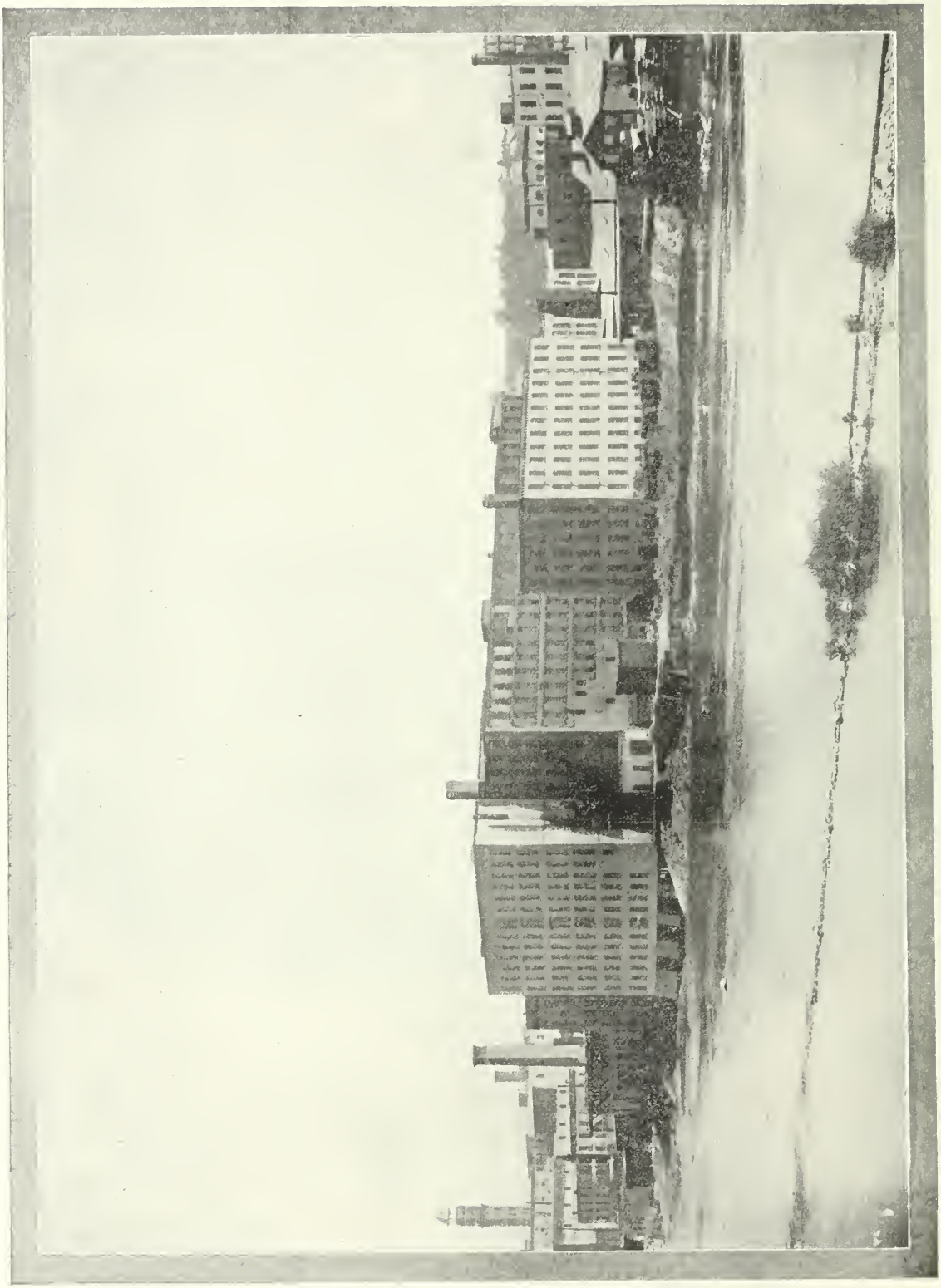
1889 there were 31 establishments reported for the state, which employed an average of 1,219 wage earners and manufactured products valued at $2,919,000. The growth during the decade from 1899-1909 was particularly noteworthy as the value of the products increased from $4,218,000 to $13,922,000. A gain of $9,704,000 or 230.1 per cent.

Brass and Bronze Products. In 1909 this industry in Michigan included 60 establishments of which 45 were primarily engaged in the manufacturing of brass casting and brass goods. The remarkable development of this industry in the state during recent years has been due largely to the increased demand for brass specialties in the manufacturing of automobiles. The total value of products increased from $2,148,000 in 1899 to $13,890,000, in 1909. Michigan ranked third among the states in the Union in this industry as measured by value of products.

Patent Medicines, and Compounds and Druggists' Preparations. Michigan is second among the states in the Union in this industry as a whole and first in the manufacture of druggists' preparations. In 1909 the value of products was $13,475,000 as compared with $7,284,000 ten years previous.

A large chemical plant.

Chemicals. Although this industry does not rank among the first in the state, Michigan holds fourth place among the states in the Union in the value of chemical products manufactured. The large supply of brine from the salt wells of the state has made the manufacture of alkali products of great value. The value of sodas form five-eighths of the total value of the products of this industry. A comparatively large number of small establishments engage in the manufacture of potash, principally from wood ashes. The growth of the industry has been rapid, the value of the product being $12,890,000 in 1909, an increase over 1899 of 142.1 per cent.



Another group of Michigan factories.

Of other important industries the Smelting and Refining of Copper is one of the most important and ranks high as one of the leading industries of the state. The construction of Steam Railroad Cars, in Michigan consists almost entirely of freight cars, and is perhaps, next in importance. The manufacture of Cash Registers, Calculating Machines, Billiard Tables and Matches, are worthy of mention, as Michigan is one of the chief states in the Union in the manufacture of these products.

Other industries which are of less importance in the state, but in which Michigan holds high rank among the states in the Union, are the manufacture of Carriages and Wagons, Stoves and Furnaces, Salt Industry, Wood Distillation, Fur Goods, Show Cases, Wall Plaster, etc.

THE COUNTIES OF THE STATE.

The information contained in the following pages concerning each county of the state is, on account of space, necessarily brief. The object is to give the reader a general idea of any county in which he may be interested. The data concerning each county is accurate, so far as it has been obtainable, but attention is called to the fact that in some instances there have undoubtedly been changes since the securing of this data that would make the information contained in this publication appear slightly at variance with the conditions found at any future date. Conditions are ever changing. A city or town may have several new and important industries added within the period of only a few weeks. New public buildings are being constantly added and other important improvements made. The population of a community is constantly changing, and since the United States census of 1910 is the only accurate information obtainable, the figures concerning the population as well as certain other information must be based upon this census, or otherwise only estimated as to present day conditions.

It is not the intention to show the advantages of one county over another from an agricultural, horticultural or industrial standpoint. No attempt has been made to enumerate the individual agricultural or horticultural crops, the raising of which may be particularly adapted to certain counties, for this too is an ever changing condition. As has been conclusively shown in the history of the state from the days of its early development to the present time, counties that a few years ago were not considered adapted to the raising of fruit are now numbered among the great fruit raising counties of the state. This condition is not alone true of counties, but of certain portions of counties as well, and is also applicable to the raising of many other crops besides fruit. Generally speaking, a crop that can be grown in one county of the state can also be grown in many of the others, but each county has its particular advantages, and because of the soil or other conditions may be peculiarly adapted to the raising of certain crops. The prospective settler should keep this in mind and should thoroughly investigate, before purchasing, the suitability of the land for the raising of particular crops he may have in mind.

ALCONA COUNTY.

Alcona county was first laid out in 1840 and was first called Negwegon, after a well known Chippewa chief. It was afterwards named Alcona, meaning, "A fine or excellent plain," and was organized as a county in 1869. It is one of the eastern tier of counties and is located towards the northern part of the Lower Peninsula.

The total land area is 435,247.34 acres, of which 105,000 acres are in farms, producing good crops.

The population is 5,703, (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $2,921,885.

The county has a large lake frontage, being bounded entirely on the east by Lake Huron.

There are 43 schools which were attended by 1,557 pupils last year, requiring the services of 48 teachers.

The county has telephone, telegraph and rural mail service, 3 banks and 2 newspapers. One paper is published at Harrisville and the other at Lincoln.

Harrisville, which is the county seat, has a population of about 500 and is located on the main line of the Detroit and Mackinac Railroad, on the west shore of Lake Huron in Harrisville Township, about 200 miles above Detroit, 100 above Bay City and 34 miles south of Alpena.

There are Baptist, Catholic, Presbyterian and Methodist churches, new six room high school, court house, agricultural hall, good hotel, roller flouring mills, creamery, contract seed house, electric lighting plant, a bank and one newspaper.

The other principal towns are Lincoln and Mikado, both located on the Detroit and Mackinac Railroad to the southwest of Harrisville—each having a bank and churches of different denominations, hotel, flour mill, etc.

The principal transportation facilities of the county are the Detroit and Mackinac Railroad and the Au Sable & Northwestern Railroad.

ALGER COUNTY.

Alger county was laid out and organized in 1885 and was named in honor of Russell A. Alger, then Governor of Michigan, and afterwards Secretary of War and United States Senator.

This county is located in the northern part of the Upper Peninsula and is bounded on the north and part of the west by Lake Superior.

The total land area of the county is 589,948.58 acres, having about 30,000 already converted into farms.

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $9,436,997.

The population is 7,675, (1910 census).

There are a total of 29 schools which were attended by 1,545 children last year, requiring the services of 61 teachers.

The county has telephone and telegraph service, 2 banks and one newspaper which is published at Munising.

Munising is the county seat and has a population of about 3,000. It is located on the Munising, Marquette and Southeastern Railway; Duluth, South Shore and Atlantic Ry., and the Minn. St. Paul and Sault Ste. Marie Railroad.

There are churches of different denominations, a high school building costing about $60,000, water works, electric lighting plant, opera house, a live weekly newspaper, 2 banks and a court house costing about $40,000. The industries include lumber mills, woodenware plant, a tannery and a paper factory which is one of the most modern in the United States. The plant is in operation night and day and is run by electricity.

The streams throughout the county are planted each year with brook trout, the nearby lakes teem with bass and perch, making Munising one of the best fishing spots in Michigan.

Grand Marais, on the shore of Lake Superior has a population of about 1,000. The village is lighted by electricity, has a fire department and a municipal pumping station. Water pipes are laid in all streets and water is furnished to every resident free, absolutely no charge being made and no restrictions as to how much is used or for what purpose.

There are churches of the Catholic, Methodist and Episcopal denominations, excellent schools, opera house, hotels telephone exchange, etc. Lumbering is the principal industry and fishing is extensively carried on.

The principal transportation facilities of the county are the Munising, Marquette and Southeastern Railway, Duluth, South Shore and Atlantic and the Minn. St. Paul and Sault Ste. Marie Railways.

ALLEGAN COUNTY.

Allegan County was laid out in 1831, and was named for an ancient Indian tribe in the Alleghanies. It was organized as a county in 1835.

It is located in the western tier of counties near the southern part of the state and is bounded on the entire west side by Lake Michigan.

The total land area of the county is 529,873.41 acres, about 475,000 acres of this land being in farms.

Taxable property in the county was placed at a valuation of $38,915,767 by the State Board of Tax Commissioners in 1911.

There are 196 schools in the county which were attended by 8,540 children last year and requiring a total of 301 teachers.

The county has efficient telephone, telegraph and rural mail service, fourteen banks, eight newspapers, etc.

Allegan is the county seat and has a population of about 3,500. It is located on the Kalamazoo river and on the Lake Shore and Michigan Southern Railway, the Michigan Central and the Pere Marquette Railways, twenty miles east of Lake Michigan, thirty-three miles south of Grand Rapids.

It is the receiving and distributing point for a rich and thickly settled agricultural section and ships large quantities of grain and general farm produce.

It is lighted by electricity, has a municipally owned water plant, well paved streets, an efficient fire department, eight churches, a splendid high school and four ward schools, a public library, hospital, three banks, opera house, good hotels, a $100,000 court house, a $10,000 city hall and two weekly newspapers.

The most important industries comprise the following: saw and planing mills, glass factory, foundry and machine shops, manufacturies of candy, cigars, kitchen cabinets, furniture, carriages, wagons, folding boxes, flour, cement blocks, caskets, chemicals, vinegar, patent medicines, etc.

The other principal towns in the county are: Douglas, Fennville, Otsego, Plainwell, Saugatuck and Wayland. The main transportation facilities through the county are the Pere Marquette Railway, Grand Rapids and Indiana Ry., Michigan United Ry., Michigan Southern Ry. and Grand Rapids, Holland and Chicago Railway.

ALPENA COUNTY.

Alpena County was laid out in 1840 and was first called Animickee, after a well known Chippewa Chief. Later the name was changed to Alpena, meaning the "Partridge Country."

Alpena county was organized in 1857. It is located in the northeastern part of the Lower Peninsula and is bounded on the entire east by Lake Huron. The land area of the county is 371,153.39 acres of which 150,000 acres are already devoted to farms. The entire population is given at 19,965. (1910 census).

In 1911, the State Board of Tax Commissioners placed the value of taxable property in the county at $12,949,233.

There are a total of 76 schools requiring the services of 131 teachers, while last year's report shows a total of 3,493 children in attendance.

The county has good telephone, telegraph and rural mail service.

Alpena is the judicial seat of Alpena County, and has a population of 12,706 (U. S. census 1910). It is beautifully located on Thunder Bay at the mouth of Thunder Bay River, and is a station on the Detroit and Mackinac Railroad.

The City owns and operates an excellent water works system and electric lighting plant costing in the neighborhood of $250,000, has a good sewerage system, paved streets, a police department, fire department, two opera houses, first class hotels, a $20,000 court house, $100,000 post-office, public library, a $75,000 depot, a $50,000 city hall and a $50,000 public hospital are now being constructed. The County has three banks, two of them being located in Alpena.

The religious and educational advantages are very good, there being churches of the following denominations: Adventist, two Baptist, three Catholic, Congregational, Episcopal, Free Methodist, Hebrew, Latter Day Saints, Two German Evangelical Lutheran, Norwegian Lutheran, Methodist Episcopal and Presbyterian churches. There are nine public and six parochial schools, also a well equipped business college.

The city has three newspapers, two published daily and one weekly.

One finds Alpena supplied with numerous industrial establishments, some of which are as follows: Lumber, shingle and planing mills, factories manufacturing all kinds of lumber products, an automobile factory, pulp works, flour and grist mills, two tanneries, two veneer works, paper mill, mattress works, breweries, electric light plant, power plant, cement works, foundry, rug and cigar factories, quarries, etc.

A government fish hatchery is located at Alpena.

The bay forms an excellent harbor and during the season of navigation, steamers bring in many visitors, making Alpena quite popular as a summer resort.

A large portion of the surrounding country is rich, fertile soil, capable of producing all cereals and roots adapted to the climate in abundance as well as some very fine fruit.

Transportation facilities throughout the county include the following: Detroit and Mackinac, Boyne City, Gaylord and Alpena railroads, and the Detroit and Cleveland Navigation Co.

ANTRIM COUNTY.

Antrim County was laid out in 1840 and was first called Meegisee, meaning "Eagle," and was named after a famous Chippewa Chief, and later, in 1843, it was changed to the name it now bears. The name "Antrim" is that of a county in the Northeastern part of Ireland.

The county was finally organized in 1863. It is located in the northwestern part of the Lower Peninsula and is bounded on the entire west by Grand Traverse Bay and Torch Lake, forming a peninsula of part of the coast line.

The total land area of this county is 305,558.44 acres, with nearly 120,000 acres already in splendid farms.

The valuation of taxable property as given out by the State Board of Tax Commissioners in 1911, is $10,865,174.

The population is 15,692 (1910 census).

Antrim County has a total of 78 schools, employing 136 teachers and an attendance of 3,495 children last year.

There is good telephone, telegraph and rural route service in the county.

Bellaire is the capital of the county and has a population of about 1,400. It is located on the Pere Marquette, East Jordan and Southern Railroads, 37 miles south of Charlevoix.

There are Congregational, Methodist and Catholic churches, good schools, electric lighting plant, a bank and a weekly newspaper. A few of the industries include: Feed and grist mills, saw mills, etc.

Other important towns of the county include: Elk Rapids, Mancelona and Central Lake.

Elk Rapids is a town of about 1,800 inhabitants and is picturesquely located on Grand Traverse Bay at the mouth of the Elk River and is a station on the Pere Marquette Ry., 34 miles southwest of Bellaire. The town is lighted by electricity, has a fine water system, churches of the Episcopal, Methodist, Catholic, German Reformed, Presbyterian and Norwegian Lutheran denominations, a $24,000 school building, good public library, a bank and two weekly newspapers. There is a good market for apples, potatoes, peas and other farm products which are raised in the vicinity. Manufacturing industries include an Iron and Chemical Co., saw and flour mills and a cigar factory.

Mancelona, located 12 miles southeast of Bellaire on the Grand Rapids and Indiana R. R. has a population the same as that of Elk Rapids. It is surrounded by a fertile tributary section with agricultural resources and possibilities, making it rich in opportunities and for which it is the trade center.

There are churches of the Congregational, Episcopal, Methodist, German Reform and Catholic denominations, a good school system, a township library, opera house, good hotels, a bank and two

weekly newspapers. There are a number of prosperous industries, including saw mills, planing mills, flour mill, creamery, and manufactories of veneer, screens, brooms, hoops, cheese box material, gasoline engines, etc.

Central Lake has a population of about 1,000 and is located 8 miles north of Bellaire on the Pere Marquette R. R. It is well known as a summer resort. Has Congregational, Free Methodist and Methodist Episcopal churches, good schools, electric lighting, two banks and a weekly newspaper.

Principal transportation facilities of the county are the Grand Rapids and Indiana, Pere Marquette, Boyne City, Gaylord and Alpena, Detroit and Charlevoix and the East Jordan and Southern Railroads, and the Northern Michigan Trans. Co.

ARENAC COUNTY.

Arenac county was laid out in 1831, and in 1857 it was incorporated into the newly formed Bay County. In 1883 it was re-established with its present limits. It is located in the northeastern part of the Lower Peninsula and is bounded entirely on the east by Saginaw Bay.

The total land area of the county is 235,097.58 acres, of which about 115,000 acres are good productive farms.

The last census taken in 1910, gives Arenac a population of 9,640 inhabitants.

There are forty-five schools in the county, with an enrollment of 2,665 children, requiring the services of 75 teachers. Also seven banks and three newspapers.

Standish is the county seat and has a population of about 1,000. It is located on the middle branch of the Pine River and on the Michigan Central Railroad.

The town is well located, being but five miles west of the shore of Saginaw Bay and 28 miles north of Bay City. It is the trade center of a productive contributory section. It is modern in many respects, having broad, shaded and well laid out streets, a good electric lighting plant, an abundance of pure water, good sewerage system, fire department, churches of the Baptist, Catholic, Christian, Congregational and Methodist denominations, good public school system, court house, opera house, good hotels, two banks and a weekly newspaper.

Other important towns of the County are Au Gres and Omer.

The main transportation facilities of the county are the Detroit and Mackinac and the Michigan Central Railroads.

BAY COUNTY.

Bay County was laid out in 1831 and was at that time called Arenac. In 1857 it was organized and took the name of Bay, because of its location on the Bay of Saginaw.

The total land area of the county is 284,626.69 acres of which about 215,000 acres are in good farms.

Bay County is located in the eastern part of the Lower Peninsula and is bounded entirely on the east by Saginaw Bay. It has a population of 68,238. (1910 census).

In 1911, the State Board of Tax Commissioners placed the value of taxable land throughout the county at $39,331,544.

There are a total of 93 schools with an enrollment of 12,085 children, requiring 322 teachers.

The county has 17 banks, 8 newspapers, telegraph, telephone and rural route service.

Bay City is the county seat and has a population of 45,166. (U. S. census 1910). It is a natural railroad, deep water, and manufacturing center, and occupies an ideal location at a point where the Saginaw river flows into Saginaw Bay, and is surrounded by a rich and productive farming section. It is a little more than 100 miles north of Detroit, the chief city of the State.

It has nearly 200 miles of streets; 35 miles of paving; over 100 miles of sewers; 25 miles of electric street railway; 50 miles of gas mains; 10 public parks covering 35 acres and valued at $600,000; a water works plant valued at $1,000,000; 100 miles of water mains; a $147,000 municipal electric lighting plant; a fire department comprising ten station houses; a police department; 18 public school buildings; 19

parochial schools; public library; theatres; 3 hospitals; first class hotels; 8 banks; a $300,000 city hall; State armory, an $80,000 Y. M. C. A., a $200,000 post-office, and beautiful churches of nearly every denomination.

There are two daily and three weekly newspapers published in Bay City.

In 1860, the inexhaustible salt basin that underlies this section was tapped, the success of which resulted in the manufacture of salt, which has since developed into immense proportions. The first beet sugar plant to be erected in the State was built in Bay City in 1898. Since then other large and modern beet sugar plants have been put into operation. The beet sugar industry has proved to be a large factor in the success of this locality as a manufacturing community.

Close to the limits of the city are coal mines with a large annual output, which are now supplying some of the railroads and many manufacturing plants.

The fishing on Saginaw Bay gives employment to a large number of people. Pickerel, bass, whitefish, perch, catfish, sturgeon and other fish are caught.

The city's industries include saw mills, sash and door factories, largest plant in the United States for making wooden pipe, large woodenware factory, veneer works, hardwood flooring mill, large Portland cement plant, railroad locomotive wrecking crane works, denatured alcohol plant, chemical Co., etc.

Other important cities of the county are Pinconning and Essexville.

Pinconning with a population of about 800 is located on the Michigan Central and Detroit and Mackinac Railroads, and on the Pinconning river 1½ miles from Saginaw Bay and 19 miles above Bay City. It is lighted by electricity, has Catholic, German Lutheran, Methodist and Presbyterian churches, public school, library, 2 banks, a weekly newspaper, water works, etc.

Essexville is a town of about 1,600 and is located on the east bank of the Saginaw river near its mouth, and about 3 miles below Bay City, of which it is in fact, a suburb. Has Baptist, Congregational and Catholic churches, sugar factory, chemical works, shingle mill, etc. A street railway affords communication with Bay City.

The transportation facilities of the county include the Michigan Central, Pere Marquette Grand Trunk, Detroit and Mackinac Railroads, The Erie and Michigan Ry. and Navigation Co., and the Saginaw and Bay City Electric.

BARAGA COUNTY.

Baraga County was laid out and organized in 1875. It was named in honor of Bishop Frederick Baraga, the great Indian apostle of the Northwest, who labored among the Indians from 1831 until his death in 1868.

This county is located in the northwest part of the Upper Peninsula and is bounded almost entirely on the north by that part of Lake Superior known as Keweenaw Bay.

It has a land area of 583,805.56 acres, of which about 35,000 acres are already in farms.

1910 census gives Baraga a population of about 6,127.

In 1911 the State Board of Tax Commissioners placed a value of $7,613,642 on all taxable property.

The County has a good school system. There are 31 schools, requiring 49 teachers and last year's report shows a total of 1,611 children in attendance.

The county has telegraph, telephone and rural mail service. There are two banks and two weekly newspapers, one published in Baraga and the the other at L'Anse.

L'Anse is the judicial seat of the county and has a population of about 1,000. The town is located at the head of L'Anse Bay on the Duluth, South Shore and Atlantic Railway, 32 miles south of Houghton and 63 miles northwest of Marquette. It is almost ideal as a summer resort, with a climate delightfully cool and refreshing, and within a short distance, are streams well supplied with brook trout, while deer and other game are plentiful.

L'Anse has electric street lights, water works, fire department, court house, good schools, good hotel, town hall and a progressive newspaper. There are also a number of slate, graphite and brownstone quarries in the immediate vicinity.

Baraga is a station on the Duluth, South Shore and Atlantic Railway and is located on Keweenaw Bay, five miles by rail or two across the bay from L'Anse and twenty-six miles south of Houghton. The beauty of location, the coolness of the climate and surrounded as it is by excellent trout streams, make it an ideal summer resort.

Transportation facilities are the Duluth, S. Shore and Atlantic, Chicago, Milwaukee and St. Paul and the Mineral Range Railroads.

BARRY COUNTY.

Barry County was laid out and organized in 1829 and was named in honor of Post Master General, William T. Barry.

The county is located near the southwestern part of the Lower Peninsula and is bounded by Kent and Ionia counties on the north, Eaton county on the east, Kalamazoo and Calhoun counties on the south and Allegan county on the west.

The entire acreage of the county is given as 354,029.41 acres, of which almost 340,000 acres are devoted to excellent farms.

In 1911, the State Board of Tax Commissioners placed a value of $21,175,834 upon all taxable land in the county.

The county has a good school system throughout, there being a total of 145 schools requiring 210 teachers, with an enrollment of 4,575 children. Excellent telephone, telegraph and rural mail service is found in every locality. There are also 8 banks and 8 newspapers.

Hastings, with a population of about 5,000, is the county seat, and was named in honor of E. P. Hastings, formally a well-known citizen of Detroit. It is located on the Michigan Central and the Chicago, Kalamazoo and Saginaw Railroads, and on the Thornapple river, 32 miles southeast of Grand Rapids.

The city is modern, having electricity, gas, water works, fire department, churches of the Adventist, Baptist, Catholic, Christian Science, Episcopal, Methodist, Presbyterian and United Brethern denominations, excellent public schools, first class hotels, an opera house, a good court house, 2 banks and 2 weekly newspapers.

There are numerous manufacturing interests, among them being a large felt boot factory, large table factory, book-case factory, chair factory, international lock and seal factory, press and tool factory, kitchen cabinet factory, planing and flour mills, cigar factories, gas works and an electric light and power plant.

Other towns in the county are Nashville, Freeport and Middleville.

Transportation facilities include the Michigan Central, Pere Marquette, Chicago Kalamazoo and Saginaw Railroads, and Michigan United Traction Co.

BENZIE COUNTY.

In 1863 the county of Benzie was laid out and organized, being taken from the lower part of Leelanau County. The derivation is uncertain, one explanation being that it is a corruption of "Betsey," the name of a river running through the county, which in turn is a corruption of the French name of the river, Riviere Aux Bec Scies, and is a translation of the Indian name of the river Uns-zig-o-ze-bec. Another explanation is that it was taken from the word "Benzonia," a place located in that county and which was the county seat.

Benzie county is located in the Northwestern part of the Lower Peninsula and is bounded on the north by Leelanau County, on the east by Grand Traverse county, on the south by Manistee county and on the west by Lake Michigan.

The total land area is 204,192.43 acres, 98,588 acres of which are devoted to farms.

The federal census of 1910 gives the county a population of about 10,638.

In 1911, the State Board of Tax Commissioners placed a valuation of $6,313,143 on all taxable land.

A school system is by no means lacking in Benzie county, there being a total of 57 schools, furnishing positions for 100 teachers and has an enrollment of 2,792 children.

Good telephone, telegraph and rural mail service is to be found.

The county has 4 banks and 6 newspapers.

The judicial seat of the county is Honor, a little town of about 550 inhabitants. It is located on the Platte river and on the Manistee and Northeastern, and Pere Marquette Railroads.

It has a Congregational church, a newspaper, a bank, hotels, saw and veneer mills, etc.

Other towns of the county include Frankfort, Benzonia, Lake Ann, Alberta, and Thompsonville.

Frankfort, with a population of over 1,600, is the largest town in Benzie county. It is a port of entry on Lake Michigan, located on the Ann Arbor Railroad, 16 miles southwest of Honor, the County Seat, 28 miles from Manistee, and 40 miles from Traverse City. It is picturesquely situated and has a magnificent harbor with eighteen feet of water in the channel. It has a lighthouse and life saving station; is supplied with electric light and water works; churches of several denominations; a twenty-five thousand dollar school building; library; hotels, and a daily newspaper. During the season, numerous lines of steamers connect Frankfort with Manistee, Milwaukee and Chicago, Mackinac, Charlevoix, Manistique and other points north, also Ann Arbor car ferries which run the year round. Like many other sections of Benzie county, Frankfort is a great fruit center, there being many acres of land in that county adapted to the raising of fruits.

Benzonia has a population about the same as that of Honor. The two towns being within 6 miles of each other. Has a Congregational church, the Benzonia Academy (a Congregational institution), a bank and a weekly newspaper.

The main transportation facilities of the county are the Pere Marquette, Manistee and Northeastern and the Ann Arbor Railroads. Also the Northern Michigan Trans. Co.

BERRIEN COUNTY.

Berrien County was laid out and organized in 1829 and was named in honor of Attorney General John M. Berrien.

This county is located in the extreme southwest corner of the Lower Peninsula in what is known as the heart of Michigan's original fruit belt. It is bounded on the north by Van Buren county, on the east, by Van Buren and Cass counties, on the south by Indiana and on the West by Lake Michigan.

This county has a total land area of 362,981.63 acres, of which 333,326 acres are devoted to splendid farms. The county has a population of about 53,622 (1910 census).

In 1911, a valuation of $65,105,048 was placed on all taxable lands by the State Board of Tax Commissioners.

The school system is equal to that of any in the state, there being in all 160 schools, requiring the services of 365 teachers, with an enrollment last year of 10,837 students.

All parts of the county are equipped with good telegraph, telephone and rural mail service.

There are 18 banks and 18 newspapers, five of which are published daily.

St. Joseph is the county seat and has a population of about 6,000. It is beautifully located on the east shore of Lake Michigan at the mouth of the St. Joseph river and on the Pere Marquette and Michigan Central Railroads 63 miles by water from Chicago and 90 miles from Milwaukee.

The natural advantages of convenient transportation routes by rail or by water, the added attraction of a beautiful and exceptionally healthful location, the interest centering in scenic environs, fishing, boating and other amusements, have made this one of the most popular summer resorts in the state. It is lighted by electricity, has broad, shaded, well paved streets, water works, fire department, sanitary sewerage system, two banks, first class hotels, trolley system, public library,

churches of the Catholic, Church of God, Congregational, Episcopal, German, Baptist, German Evangelical, German Lutheran, German United Evangelical, Methodist and Swedish Lutheran denominations, public school system.

Large quantities of fruit that grow in this section are shipped from St. Joseph. Two daily and three weekly newspapers are published. Some of the city's important industrial establishments are basket and fruit package factories, knit goods factory, iron works, sash and door factory, paper mill, flour and planing mills, door, map, air rifle, electrical machinery, boiler and washing machine factories.

It is connected with Benton Harbor, one mile distant, by electric railway.

Benton Harbor, the largest city in the county, has a population of about 10,000. It is 63 miles by water from Chicago, 90 miles by rail, and 94 from Milwaukee and is on the Pere Marquette and Michigan Central Railroads, near the confluence of the Paw Paw and St. Joseph rivers, one mile inland from the mouth of the latter on Lake Michigan and connected therewith by a ship canal of sufficient depth to receive the largest lake steamers and affording one of the best harbors on the shore. It is the center of a great fruit growing district and one of the most important fruit shipping ports on the lake.

The city is lighted by electricity and gas, has water works, an efficient fire department, police department, electric street railway, wide, shaded and well paved streets, excellent sewerage, handsome churches of many denominations, fine school system, public library, opera house, 3 banks, first class hotels, 4 wholesale fruit houses and 3 progressive newspapers, 2 of which are published daily and 1 weekly. Eastman Springs, a well-known health resort is located 1 mile east and is connected by car line. The city's principal manufacturing industries include one of the largest book binding and loose leaf plants in the world, malleable foundry plants, metal sectional furniture factory, lumber mills, saw and planing mills, box and fruit package factories, wagon and buggy factory, pickle, cider and vinegar works, ornamental stamping works, metal and iron company, flour and feed mills, garment factory, cigar factories, also manufactories of saw filing machinery, brooms, gas engines, tents and awnings, etc.

Other principal towns of the county are Berrien Springs, Buchanan, Coloma, Watervliet, Three Oaks, New Buffalo, Niles, and Eau Clair. The principal transportation facilities are the Michigan Central, Pere Marquette, Southern Mich. (electric), the Graham & Morton Trans. Co., Benton Transit Co., and the Benton Harbor & St. Joseph Ry.

BRANCH COUNTY.

Branch county was laid out and organized in 1829 and was named in honor of Secretary of Navy, John Branch.

It is located in the middle of the lower tier of counties in the lower Peninsula and is bounded on the north by Calhoun county, on the east by Hillsdale county, on the south by Indiana and on the west by St. Joseph county. The entire population is 25,605 (1910 census.)

The total land area is 320,719.92 acres, of which about 307,000 acres are in farms.

In 1911, the State Board of Tax Commissioners placed a valuation of $33,297,585 on all taxable lands.

There are 131 schools, an enrollment of 4,856 scholars, requiring the services of 211 teachers.

The county has nine banks, one daily and six newspapers. Good telegraph, telephone and rural mail service can be found in every locality.

The capital city of Branch is Coldwater, a city of about 6,000 inhabitants. It is located on the Lake Shore and Michigan Southern Ry., 43 miles southwest of Jackson and 65 miles south of Lansing. The name "Coldwater" is an interpretation of the Indian word applied to the beautiful group of lakes in the vicinity. The city has wide and well laid out streets, is lighted by electricity, has good sewerage system, municipal water works and electric lighting plant, fire department, a $12,000 public Library, three banks, opera house, hospital, a $50,000 post office, public Hall, good hotels, one weekly and two daily newspapers.

The various industries include a foundry, creamery, gas light and fuel plant, planing mills, machine shop, brass works, flour mill, carriage factory, cement plant and manufactories of ladders, cigars, gasoline engines, lawn furniture, wooden novelties, medicine, castings, etc. Four public schools, churches of the leading denominations, the State Public School, consisting of 18 buildings and occupying 160 acres, is located in Coldwater. The surrounding country is a rich and productive agricultural section.

The other principal towns are Bronson, Sherwood, Union City and Quincy.

Transportation facilities of the county are the Lake Shore and Michigan Southern and the Michigan Central Railroads.

CALHOUN COUNTY.

Calhoun county was laid out in 1829. In 1833 it was organized and named in honor of Vice-President, John C. Calhoun.

It is located in the southern part of the lower peninsula and is bounded on the north by Barry and Eaton counties, on the east by Jackson county, on the south by Branch and Hillsdale counties and on the west by Kalamazoo county.

Calhoun has a total land area of 447,452.44 acres, of which 411,801 acres are already devoted to farms.

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911 is $73,846,732.

The county is well supplied with schools, there being a total of 185, supplying positions for 409 teachers with an enrollment of 10,747 students.

The total population is 56,638 (1910 census).

There are 11 banks, four daily and nine weekly newspapers, telegraph, telephone and rural route service.

Marshall, which is the county seat, has a population of about 5,000 and is located at the confluence of Rice Creek with the Kalamazoo River and on the Michigan Central and the Lake Shore and Michigan Southern Railways, and the Michigan United Railway. (Electric)

The city owns an electric lighting plant, the power for which is generated by the water power which was purchased by the city. The city also owns its own system of water works, which cost about $50,000. It has a good school system, ten churches of different denominations, two banks and three daily newspapers, also a court house costing about $80,000. The grounds of the Calhoun Agricultural Society are also located here. Among the most prominent manufactories are flouring mills, cigar factories, furniture factory, carriage factory, a creamery and cold storage food factory, two furnace factories, marble and granite works, also foundry and machine shops.

Other towns of the county include Albion, Athens, Battle Creek, Burlington and Homer. The most important of these are Albion and Battle Creek.

The population of Battle Creek is about 30,000. It is located at the confluence of the Battle Creek and Kalamazoo rivers; on the Michigan Central and Grand Trunk Railroads, and on the Michigan United Traction Co. It is 13 miles west of Marshall, the county seat, 45 miles southwest of Lansing and 23 miles east of Kalamazoo.

Battle Creek's manufactories include threshing machines, portable engines, health foods, stoves, oven racks, paper roofing, tables, paper, boilers, electrical goods, wire novelties, steam pumps, printing presses, woodworking machinery, flour, sash, door and blinds, brass goods, furniture, printing ink, railroad cars and engines, etc. One of the large engine shops of the Grand Trunk System, erected at a cost of about $2,000,000 is located here. This is also the home of the Battle Creek Sanitarium, which is the largest of its kind in the world.

There are 4 banks, 14 public and 2 parochial schools, including a new high school building which has just been completed at a cost of about $90,000, and a beautiful public library. The religions of the city are represented by many handsome churches, of which the most prominent are the Baptist,

Adventist, Congregational, Episcopal, German Evangelical, and Methodist. The city has 8 first class hotels, 3 daily newspapers and 5 monthly publications, electricity and gas, a municipally owned water plant which cost about $300,000, well equipped fire departments and a post-office building costing $150,000.

The country surrounding Battle Creek is very productive and wheat, oats, corn, hay, fruits and garden products are raised in abundance. Electric street car lines connect with all surrounding points.

Transportation facilities of the county are the Grand Trunk, Michigan Central and the Lake Shore and Michigan Southern Railroads, and the Michigan United Railway Co.

CASS COUNTY.

In 1829, the county of Cass was laid out and organized, and was named in honor of Louis Cass, then Territorial Governor.

The county is located in the southwestern part of the Lower Peninsula. It is bounded on the north by VanBuren county, on the east by St. Joseph county, on the south by Indiana and on the west by Berrien county.

Nineteen hundred ten census gives Cass county a population of about 20,604.

The total land area comprises 316,393.00 acres. Of this number, 295,435 acres are devoted to farms which are wonderfully productive, and in 1911, the State Board of Tax Commissioners placed a valuation of $24,517,691 on all taxable lands.

The school system is equal to that of any of the larger counties, there being 114 schools, attended by 4,008 children and requiring 170 teachers.

Telephone, telegraph and rural mail service can be found in every community throughout the county.

There are 10 banks, 1 daily and 5 weekly newspapers.

Cassopolis is the judicial seat of the county and has a population of about 1,500. It is located on the Michigan Central and Grand Trunk Railroads, 14 miles northeast of Niles and 89 miles southwest of Jackson. The town is lighted by electricity, has water works, a fire department, handsome court house, opera house, two banks, churches of the Baptist, Methodist, Presbyterian, African Methodist, Episcopal and African Baptist denominations, excellent educational advantages, and two weekly newspapers.

Among the other thriving communities of the county are Dowagiac, Marcellus and Vandalia.

Dowagiac is an enterprising city of 5,088 inhabitants, (1910 census), and is located on the Michigan Central and Benton Harbor and St. Joseph Railways, and on a branch of the Dowagiac river. It is 10 miles northwest of Cassopolis.

The city is situated in the heart of one of the finest agricultural districts in the state, is well laid out with wide, well paved and shaded streets, is lighted by electricity, has municipally owned water works, fire department, opera house, 3 banks, 3 newspapers, churches of the Congregational, Christian, Catholic, Baptist, Disciples and Methodist denominations, a public school system on a plane with any city of its size in the state, public library and a ladies library. Among the leading industries are manufactories of stoves and furnaces, carriages, wagons, auto carriages, grain seeders, flour, cigars, carriage tops, leather novelties, sash doors, lumber, axles, cabinets, brooms, tanks, oils, etc.

Marcellus has a population of about 1,100 and is a station on the Grand Trunk Railway, 14 miles northwest of Cassopolis; has Baptist, Evangelical, Methodist and United Brethern churches, public hall, water works, electric lighting plant, 2 banks and a newspaper.

The Michigan Central, Grand Trunk Railways and the Benton Harbor and St. Joseph Electric Ry., are the principal transportation facilities of the county.

CHARLEVOIX COUNTY.

Charlevoix county was laid out in 1840 and was at that time called Keshkauko, the name of a leading chief of the Chippewas. In 1843 the name was changed to Charlevoix in honor of Pierre Francois Xavier de Charlevoix, the French Jesuit Missionary, traveler and historian. The county was organized during the year 1869.

It is located in the northwestern part of the Lower Peninsula; is bounded on the north by Emmet county, east by Cheboygan and Otsego counties, on the south by Otsego and Antrim counties and on the west by Lake Michigan.

The total land area is 266,224.98 acres, 127,625 acres of which are devoted to farms.

The population is 19,157 (1910 census).

There are 77 schools in Charlevoix county, with an enrollment of about 4,536 students, requiring the services of 163 teachers.

There are 7 banks, one daily and six weekly newspapers in the county, also telegraph, telephone and rural mail service.

Charlevoix is the capital city of the county and has a population of about 2,500. It is beautifully located on the shore of Lake Michigan at the entrance to Pine Lake and its ideal attractions and many charms have made it famous as a summer resort. It is located on the Pere Marquette Railroad, 210 miles north of Grand Rapids. The city owns and controls its own electric light and water plants, has churches of the Baptist, Congregational, Episcopal, Methodist and Catholic denominations, an up-to-date public school system, public library, good hotels, 2 banks, an opera house and two weekly newspapers.

There are saw and shingle mills, and manufactories of flour, beet sugar, cement, boilers, boats and launches, rustic furniture and bridges. A large shipping trade is done in wood, bark, ties, cedar posts, lumber and fish.

Other cities of importance are Boyne City, Boyne Falls and East Jordan.

Boyne City has a population of 5,218 (1910 census), is located on the Boyne City, Gaylord and Alpena Ry., and Pine Lake, 16 miles southeast of Charlevoix. The city is lighted by electricity, has perfect natural drainage supplemented by a splendid sewerage system, fire department, paved streets and good water for domestic and industrial purposes. In the hills surrounding the city to the north and south is a never failing supply of flowing wells and spring water which is furnished to users through 16 miles of mains. There are churches of the Baptist, Evangelical, German Evangelical, Methodist, Presbyterian and Roman Catholic denominations, a first class public school system, 2 banks, first-class hotels, a hospital and two newspapers.

In the list of manufacturing industries of Boyne City, that of the manufacture of lumber constitutes one of the most important industries. The city is destined to become one of the largest manufacturing centers in the state for lumber, lath, shingles, flooring, veneer, sash, doors, and other timber products, as well as for furniture and carriages. The industrial interests include some of the largest hard wood lumber mills in the world, large veneer plant, planing mills, largest shingle plant in the State, manufactories of boxes and baskets, charcoal, brick and tile, chemicals, etc. Principal transportation facilities of the county are the Pere Marquette, Boyne City, Gaylord and Alpena, Detroit and Charlevoix, Grand Rapids and Indiana Rys., and the Northern Michigan Transit Co.

CHEBOYGAN COUNTY.

Cheboygan County was laid out and named in 1840, and was organized in 1853. It was named from a river of the same name and has many meanings ascribed to it.

The county is located in the extreme northern part of the Lower Peninsula. It is bounded on the north by Lake Huron, on the east by Presque Isle county, on the south by Otsego and Montmorency counties and on the west by Charlevoix and Emmet counties.

The total land area comprises 462,439.73 acres. Of this number 120,418 acres are devoted to farms. It has a total population of 17,872 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $12,003,821.

The county has splendid educational advantages. There are in all, 84 schools, requiring 139 teachers, with a total enrollment of 4,138 students.

There are 6 banks, 1 daily and 3 weekly newspapers in the county, also telegraph, telephone and rural mail service.

Cheboygan is the judicial seat of the county and has a population of about 8,000. It is a thriving manufacturing and shipping point and the lake port of one of the best farming sections in Michigan, located in the Straits of Mackinac at the mouth of the Cheboygan and Black rivers and on the Mich. Central and the Detroit and Mackinac Railroads.

In addition to its rail facilities, it has many boat lines connecting with nearly every large port on the lakes.

The city is thoroughly modern, has well paved streets, fine sewerage system, water works, a well equipped fire department, 10 miles of water mains, police department, 9 public schools, a county normal school, 3 parochial school, public library, opera house, first class hotels, 3 banks, churches of different denominations, electric light, gas and power plant and 3 newspapers.

This section grows large quantities of such fruits as cherries, plums, and apples. Potatoes, hay, oats, barley, corn and rye are raised in abundance.

The principal industries of the city are saw mills, one of the largest tanneries west of New York, large paper mill, foundries, snow plow works, automobile factory, fire kindle factory, cannery, flour mill, sash, door and blind factory, wood turning works, boiler works, machine shops, cigar factories, packing industries, planing mills, etc. The other principal towns are Tower and Wolverine.

The transportation facilities of the county are the Mich. Central and the Detroit & Mackinac Railroads. The Detroit & Cleveland Nav. Co., Northern Mich. Nav. Co., and the Arnold Trans. Co.

CHIPPEWA COUNTY.

Chippewa county was laid out and organized in 1826, and was at one time part of Michilimackinac county. The name was taken from the Chippewa or Ojibway Indians, the largest of the Algonquin tribes.

The county is located in the extreme eastern part of the Upper Peninsula and is bounded on the north by Lake Superior and White Fish Bay, on the east by Lake George, St. Mary's river, Mud Lake, and a portion of the North Channel, on the south by Mackinac county and Lake Huron, and on the west by Luce county.

The county has a total land area of 999,960.22 acres, with about 176,000 acres devoted to farms. A considerable acreage of the agricultural land in Chippewa county is being very successfully devoted to dairying and stock raising.

The federal census of 1910 gives Chippewa county a population of 24,472.

In 1911, the State Board of Tax Commissioners placed a valuation of $19,764,959 on all taxable lands in the county.

There is a good school system throughout the county, there being 90 schools, requiring 166 teachers, and last year's records show a total of 5,516 children in attendance.

In the county may be found good telegraph, telephone, and rural mail service.

There are 5 banks, 1 daily and 2 weekly newspapers.

Sault Ste. Marie is the judicial seat of the county as well as being the largest city and has a population of 12,615 (1910 census). It is located on the St. Mary's river, near the outlet of Lake Superior, opposite the famous Sault rapids, 170 miles east of Marquette.

Here is the location of one of the greatest ship canals in the world through which the commerce

of the Great Lakes passes on its way to and from Lake Superior and Lake Huron. The city's position on the St. Mary's river on a series of rapids which made necessary the ship canal is responsible for a second great attraction at this point—the power canal with all its attendant possibilities.

In this enterprise is realized the utilization of the natural forces inherent in the waters of Lake Superior as they flow over a sandstone rock ledge about half a mile long and half a mile wide, with a fall of twenty feet.

Water power developments have been planned, attempted and carried out and locks by which boats have been enabled to pass these falls have been constructed and operated during the past 100 years, but it has been left to this day and generation to witness the practical consummation of the greatest possibilities in both directions, since of this formerly dormant power more than half has now been brought under control, while locks are now in operation and being improved, capable of passing up and down the largest fleet of merchant carrying vessels on the face of the globe.

Lake Superior covers an area of some 30,000 square miles, fed from a water shed of hundreds of thousands of square miles, the Sault rapids being its only outlet. The quantity discharged fluctuates with the varying conditions of precipitation and evaporation from about 3,000,000 to 7,000,000 cubic feet per minute, which, rushing over the Sault rapids, represents an equivalent of 130,000 to 260,000 horsepower.

The freight movement to and from Lake Superior consists largely of such commodities as hard and soft coal, ore, wheat and lumber.

The total tonnage of these commodities that passed through the canal during the season of 1912 was 72,472,676 net tons, an increase of 18,955,460 tons over the shipments of the year previous. The work of widening the Soo Ship Canal is now under way.

Sault Ste. Marie is lighted by electricity, has a complete sewerage system, efficient fire department, and the purest water is supplied by a $200,000 system of water works. There are churches of the Baptist, Catholic, Disciples, Episcopal, Finnish and Swedish Evangelical Lutheran, Free Methodist, Methodist Episcopal and Presbyterian denominations, a high school and 6 ward schools, a public library, a handsome courthouse which was erected at a cost of about $75,000, a city hall, a beautiful new Federal building, well laid out streets, 3 banks, first class hotels, a daily and 2 weekly newspapers.

Situated as it is, among ideal surroundings, "The Soo" has gained the reputation of being one of the finest summer resorts in the country.

The shipping facilities of the county are exceptionally good and include the Minneapolis St. Paul and Sault Ste. Marie, and the Duluth South Shore and Atlantic Railroads, the Erie and Mich. Ry. and Nav. Co., Northern Mich. Nav. Co., Erie and Western Trans. Co., Northern Steamship Line, Canadian Pacific S. S. Co., the Mutual Anchor Line, and the C. D. & G. B. Trans. Co.

CLARE COUNTY.

Clare county was laid out in 1840 and was at that time called Kaykakee, which in the Chippewa language means "pigeon hawk." Later, in 1843 the name was changed to Clare, taken from the name of a county in Ireland. The county was organized in 1871.

This county is located in the North central part of the Lower Peninsula. It is bounded on the north by Missaukee and Roscommon counties, east by Gladwin county, south by Isabella county, and west by Osceola county. The total land area is 364,756.51 acres, about 165,000 acres of which are already devoted to farms. The valuation of all taxable property as estimated by the State Board of Tax Commissioners in 1911, is $4,071,360. In 1910 the county had a population of 9,240. The total number of schools in the county is 71, furnishing positions for 102 teachers and about 2,376 scholars in attendance.

The county has 6 banks and 4 weekly newspapers, also good telephone, telegraph and rural mail service. The county is rich in agriculture and stock raising.

Harrison is the county seat and has a population of about 600. It is located on the shore of Budd

lake, one of the most beautiful inland bodies of water in Northern Michigan. It is a station on the Pere Marquette Ry., 72 miles from Saginaw.

It has Catholic, Congregational, Methodist and United Brethern churches, good schools, electric light, water works, opera house, 2 banks and a weekly newspaper.

Other towns of the county include Clare, which is the largest town in the county and has a population of about 1,400, and Farwell, with a population of about 535.

Clare is located on the Pere Marquette and Ann Arbor Rys., 18 miles south of Harrison, 50 miles from Saginaw and 94 miles from Lansing and is surrounded by excellent farms.

It is lighted by electricity, has water works, churches of the Baptist, Catholic, Congregational, Free Methodist, German Lutheran and Methodist denominations, a $25,000 school building, public hall, opera house, good hotels, 2 banks and 2 weekly newspapers. Manufacturing industries include saw, shingle and planing mills, flour mill, stave and heading factories, electric lighting plant, foundry, machine shops, creamery, pickle salting station, etc. The chief shipments include lumber, shingles, hoops, handles, staves, heading, bark, telegraph poles, wheat, hay, produce and cattle.

The principal transportation facilities of the county are the Pere Marquette and Ann Arbor railroads.

CLINTON COUNTY.

Clinton county was laid out in 1831 and was organized in 1839. The county was named in honor of Dewitt Clinton, through whose efforts the Erie Canal had been built, which had a great effect upon the fortunes of Michigan.

This county is located in the south central part of the Lower Peninsula. It is bounded on the north by Gratiot county, on the east by Shiawassee and Ingham counties, on the south by Eaton and Ingham counties and on the west by Ionia county.

The total land area is 364,972.96 acres, about 352,000 acres of which are already devoted to wonderfully productive farms.

The valuation of all taxable property as estimated by the State Board of Tax Commissioners in 1911, is $30,428,680.

The federal census of 1910 gives Clinton county a population of 23,129.

The school system is equal to that of any of the larger counties, there being 131 schools, attended by 4,385 children and requiring 200 teachers.

There are 10 banks and five weekly newspapers. Also the best of telegraph, telephone and rural mail service.

St. Johns is the county seat, also the largest town. It has a population of about 3,500, and is located on the Grand Trunk Ry., and the Mich. United Traction Co. (electric), 18 miles north of Lansing, 26 east of Ionia and 98 northwest of Detroit.

The city is well laid out and possesses many attractive features among which are its churches, of which there are Congregational, Episcopal, Baptist, Methodist, Free Methodist, Catholic and German Lutheran denominations.

Has municipally owned electric light and water works plant, a ladies library, 3 school buildings, opera house, three banks, good hotels and 2 weekly newspapers. Among the prominent industries are saw and grist mills, grain elevators, a foundry, gasoline engine works, heating boiler works, a quilt factory, agricultural implement supply works, drilling and prospecting tool works, canning factory, creamery, 2 portable building factories, wagon factory and a cider mill. The town is connected with Lansing by electric railway.

Other thriving towns of the county include Elsie, (pop.600); Fowler, (pop. 476); Maple Rapids, (pop. 529); Ovid, (pop. 1,100); and Westphalia, (pop. 375).

Ovid is located on the Grand Trunk Ry., and on the Maple river, about 10 miles east of St. Johns, 10 west of Owosso and 24 northeast of Lansing. Has electric light and water works plant, churches

of the Congregational, Baptist, Free Methodist and Methodist denominations, a graded public school, opera house, 2 public halls, a bank and a weekly newspaper

The transportation facilities of the county include the Grand Trunk, Pere Marquette, Ann Arbor and Michigan Central Railroads, and the Michigan United Traction Co. (electric).

CRAWFORD COUNTY.

Crawford county was originally called Shawono, the name of a famous Chippewa Chief. The word means "southern." Later, in 1843 the name was changed to Crawford, being named in honor of Col. Wm. Crawford who was captured by Indians and burned at the stake.

It is located in the north central part of the Lower Peninsula. Is bounded on the north by Otsego county, on the east by Oscoda county, on the south by Roscommon county and on the west by Kalkaska county.

The county has a total land area of 359,845.89 acres. Of this number, about 46,000 acres are in in farms.

The population is 3,934 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $4,471,377.

There are 24 schools, requiring the services of 48 teachers, and last year's report showed a total of 1,003 scholars in attendance.

The county has 2 banks and 1 weekly newspaper. Also good telegraph and telephone service.

Grayling is the largest town and also the judicial seat of the county. Has a population of about 2,000, is 92 miles northwest of Bay City and 90 from Mackinaw.

It is the division point of the Michigan Central Railroad between Bay City and Mackinaw.

The Manistee and North-eastern Railroad was extended to Grayling via Walton Junction about two years ago and opened up direct communication to Chicago by way of Lake Michigan through Manistee and also a new route south and east by way of the Grand Rapids and Indiana and the Pennsylvania roads. The town is lighted by electricity, has water works, fire department, opera house, fine court house, a bank, a weekly newspaper and the Grayling Mercy Hospital costing about $25,000.

Has churches of the Catholic, Lutheran, Methodist Episcopal, Presbyterian and Protestant Methdist denominations, and good schools.

Principal transportation facilities of the county are the Michigan Central, Detroit & Charlevoix and the Manistee & Northeastern Railroads.

DELTA COUNTY.

Delta county was laid out in 1843 and was organized in 1861. The county as originally laid out included not only the present territory, but also Menominee and part of Dickinson, Marquette and Iron counties, giving it the shape of the Greek letter "Delta" from which the county takes its name.

It is located in the south central part of the Upper Peninsula. Is bounded on the north by Alger county, on the east by Schoolcraft county and Lake Michigan, on the south by that part of Lake Michigan known as Green Bay, and on the west by Menominee and Marquette counties.

The total land area of the county is 748,915.44 acres. Of this number, about 113,000 acres are in profitable farms.

The federal census of 1910 gives Delta county a population of about 30,108.

In 1911, the State Board of Tax Commissioners placed a valuation of $18,848,782 on all taxable lands.

The county has a good school system. There are 82 schools, supplying positions for 199 teachers and an enrollment of 6,776 children. There are six banks, 2 daily and 5 weekly newspapers, also good telephone, telegraph and rural mail service in the county.

Escanaba is the largest city, as well as being the capital city of the county. It has a population of about 14,000, is located on the Chicago & Northwestern, and the Escanaba & Lake Superior railroads. Its situation is as beautiful as it is advantageous for commerce. It is located on a point of land dividing Green Bay from Little Bay de Noc, the latter forming one of the best harbors on the entire chain of lakes. It is very easy of approach, having an entrance three miles in width and depth sufficient to float the largest vessels. The city is one of the two great shipping points for iron ore.

The statistics of the port and its capabilities are almost incredible to any one who has not already something like a just appreciation of the magnitude of the iron interests of this great region. Its six enormous iron docks have a capacity of 95,000 tons, at which 30 vessels can be loaded simultaneously and from 20,000 to 30,000 tons can be shipped in twenty-four hours. The docks are lighted by electric lights and are kept in full operation day and night. There are also large merchandise and commercial docks, handling 150,000 tons of coal annually.

The fish trade is an important industry, daily shipments being large.

The city is lighted by electricity, has broad and well paved streets, water works, fire and police departments, electric street railway, 2 Baptist, 3 Catholic, Episcopal, 4 Lutheran, 2 Methodist, Presbyterian and Swedish Mission churches, a high school building costing about $40,000, a public library, hospital, first class hotels, a handsome court house costing about $27,000, 2 daily and 4 weekly newspapers, 3 banks, 3 theatres, etc.

Good farming and hardwood timber land lies within a few miles of the city and the Escanaba river which rises in the iron region and here flows into the lake, furnishes splendid water power.

Other towns of importance are Gladstone, (pop. 4,211); Garden, Ford River and other small but thriving towns.

Gladstone is located on the west shore of Little Bay de Noc, seven miles north of Escanaba with which it is connected by electric railway. It is a station on the main line of the Milwauke, St. Paul & Sault Ste. Marie railroad. Has a municipal electric lighting plant, a water works plant built at a cost exceeding $35,000, fire department, opera house, 2 banks and 2 weekly newspapers. Has churches of the Congregational, Baptist, Catholic, Evangelical Lutheran, Methodist, Presbyterian, Swedish, Finnish Baptist, and Swedish Mission denominations.

Excellent boating, bathing and fishing make this city an ideal summer resort. The Soo Line has made this point its water terminus and has erected a grain elevator, flour, iron and coal docks, which are among the largest individual docks on the lakes.

The transportation facilities of the county are the Minneapolis St. Paul & Sault Ste. Marie, Chicago & Northwestern, Escanaba Traction Co., and the Escanaba & Lake Superior railroads. The Arnold S. S. Line, and the Goodrich S. S. Co.

DICKINSON COUNTY.

Dickinson county, which was at one time part of Menominee, Iron and Marquette counties, was organized in 1891, and was named in honor of Postmaster General Don M. Dickinson.

The county is located in the south central part of the Upper Peninsula and is bounded on the north by Marquette county, on the east by Marquette and Menominee counties, on the south by Menominee county and Wisconsin and on the west by Iron county and Wisconsin.

The total land area of the county is 491,925.09 acres. Of this number, about 24,000 acres are devoted to farms.

Nineteen hundred ten census gives the county a population of 20,524.

In 1911, the State Board of Tax Commissioners placed a valuation of $23,132,495 on all taxable land in the county.

There are a total of 44 schools, requiring the services of 164 teachers and an enrollment of 5,560 children.

The county has 3 banks, 1 daily and three weekly newspapers.

Iron Mountain is the judicial seat and the largest city in the county. It has a population of about 10,000, is located on the Chicago & Northwestern and the Chicago, Milwaukee and St. Paul Railroads, 72 miles northwest of Menominee.

It is lighted by electricity and gas, has water works, fire department and excellent sewerage. There are churches of the Baptist, Catholic, Episcopal, German Lutheran, Methodist Episcopal, Presbyterian, Swedish Mission, Swedish Methodist, Swedish Baptist and Swedish Lutheran denominations, 9 handsome school buildings, a library costing $20,000, a fine opera house, an $85,000 county building, 2 banks, a daily newspaper, etc. The Actual Business College, located here, occupies a prominent place among the commercial educational institutions of the State.

This is the location of the famous Chapin Iron Mine, one of the largest and best in the Upper Peninsula, producing a very rich hematite ore, from which is made the best Bessemer iron and steel. The mine is worked at a depth of about 1,500 feet. The plant is of the most modern description, and immense hydraulic machinery, costing about $500,000, has been constructed to convey compressed air into the mine and is used for operating all machinery connected with the mine. There are other iron mines surrounding the city and with carriage and wagon works, cement works, etc., are the principal industries of the place.

Norway, another town in Dickinson county, has a population of about 5,000, is located on the Chicago & Northwestern and the Michigan and Wisconsin Railroads, 8 miles east of Iron Mountain. Mining, farming and lumbering are the principal industries. There are churches of the Baptist, Catholic, Lutheran, Methodist Episcopal, Norwegian and Swedish Mission denominations, good schools, a convent, a bank and 1 weekly newspaper.

Vulcan, also in Dickinson County, with a population estimated at nearly 3,000, is located on the Chicago & Northwestern Railway, ten miles southwest of Iron Mountain, the County seat, and two miles from Norway. Among the principal industries are the manufacture of brick and the mining and handling of iron ore in large quantities. There are churches of several denominations.

The transportation facilities of Dickinson county are the Escanaba & Lake Superior, Chicago & Northwestern, Chicago Milwaukee and St. Paul, and the Wisconsin and Michigan Railraods.

EATON COUNTY.

Eaton county was laid out in 1829 and was organized in 1837, and was named in honor of Sec. of War, John H. Eaton.

This county is located in the South central part of the Lower Peninsula. It is bounded on the north by Ionia and Clinton counties, on the east by Ingham county, on the south by Calhoun and Jackson counties and on the west by Barry county.

The total land area is 366,033.45 acres, of which about 345,000 acres are devoted to splendid farms.

Nineteen hundred ten census gives Eaton county a population of 30,499.

There are 149 schools, a total enrollment of 5,967 children, requiring the services of 249 teachers.

The county has 14 banks, 14 weekly newspapers, good telephone, telegraph and rural mail service.

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $33,785,181.

Charlotte is the largest city and the judicial seat of the county. It has a population of about 5,000, is located on the Michigan Central and Grand Trunk Railways, 18 miles southwest of Lansing and 59 miles southeast of Grand Rapids.

The city is lighted by electricity and gas, has wide paved streets, fire department, water works, a number of beautiful parks, churches representing the leading denominations, excellent public schools, a library, three newspapers and two banks.

The principal manufacturing industries consist of brass lubricator works, foundry, library and dining table factory, auto accessory works, hay fork pulley factory, flour and grist mills, brick and tile works, scythe snath factory, iron culvert works, manufactory of wooden specialties, etc.

Other enterprising towns of the County include Grand Ledge, Eaton Rapids, Bellevue, Olivet and Dimondale.

Grand Ledge with a population of about 3,000 is located on the Pere Marquette Ry., sixteen miles northeast of Charlotte and about twelve miles from Lansing. Soft coal is mined to the west of the city, also fire clay for two large sewer pipe works; the city is lighted by electricity, has water works, fire department, telephone service, opera house, two banks, gas works, two union schools, four churches and two weekly newspapers. The manufacturing industries include two chair factories, a foundry, two power companies, sewer pipe and tiling works, flour mill, wire works, paint works, cement block works, planing mill, carriage and wagon works, two grain elevators, etc.

Eaton Rapids another thriving and prosperous city of the County, with a population of about 2,200, is located on the Grand River, upon the Lansing branch of the Lake Shore & Mich. Southern Ry. and also upon the Michigan Central Ry. It is lighted by electricity, the City owning its own plant; has water works, fire department, churches of several denominations, an excellent system of public schools, public library, two banks and an opera house. The city has several thriving manufacturing industries. The entire county is particularly well adapted to farming and from most every town in the county, quantities of grain, live stock, flour, fruit, butter and eggs are shipped.

Transportation facilities of the county are the Grand Trunk, Michigan Central, Lake Shore and Michigan Southern, and the Pere Marquette Railroads.

EMMET COUNTY.

Emmet county was laid out in 1840 and was first called Tonedagana. In 1843 the name was changed to Emmet, in honor of the Irish patriot, Robert Emmet.

The county was finally organized in 1853.

It is located in the extreme northern part of the Lower Peninsula, is bounded on the north by Lake Michigan and the Straits of Mackinac, on the east by Cheboygan county, on the south by Charlevoix county and on the west by Lake Michigan.

The total land area of the county is 300,855.39 acres. About 125,000 acres are now being farmed with great success.

The population is 18,561, (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $16,646,690.

The school system is equal to that of most any of the larger counties, there being 78 schools, attended by 3,765 children and requiring 150 teachers.

There are 5 banks, 1 daily and 4 weekly newspapers.

Good telegraph, telephone and rural mail service is found. The county in general is well adapted for farming.

Petoskey with a population of over 5,000 is the judicial seat, and also the largest city in the county. The county seat was originally located at Harbor Springs but was removed to Petoskey by a vote of the people of the county in 1910.

It is located on the Grand Rapids & Indiana, and the Pere Marquette Rys., at the mouth of Bear river, on Little Traverse Bay, which is 6 miles wide and 9 miles long. The city is lighted by electricity, has water works, fire department, gas plant, an opera house, 2 banks, a beautiful court house erected at a cost of about $30,000, 2 weekly newspapers, churches of the Adventist, Baptist, Catholic, Christian Science, Episcopal, German Evangelical, German Lutheran, German Methodist, Methodist, Mennonite and Presbyterian denominations, excellent public schools, a public library, first class hotels and numerous substantial manufacturing and business houses.

Paper, leather, sectional blocks and lumber are the leading manufactured articles.

Other towns of importance are Alanson, (pop. 500), Harbor Springs, (pop. 2,000), and Pellston, (pop. 1,200).

The largest of these is Harbor Springs, which is located on the Grand Rapids & Indiana railroad, 8 miles north of Petoskey, on the north side of a fine land-locked harbor formed by the projection of Harbor Point across the northern part of Little Traverse Bay. It is one of the best natural harbors upon the entire chain of Great Lakes.

Climate, location and natural beauty have made Harbor Springs famous as a summer resort. There are churches of Baptist, Catholic, Episcopal, Methodist and Presbyterian denominations, excellent schools, water works, good hotels, a boat factory, a bank and a newspaper.

Large quantities of grain, produce, lumber, wood, maple sugar and fish are shipped.

The principal transportation facilities of the county are the Grand Rapids & Indiana, and the Pere Marquette railroads, the Northern S. S. Co., Northern Michigan Trans. Co., and the Goodrich Trans. Co.

GENESEE COUNTY.

Genesee county was laid out in 1835 and was organized in 1836, and was named from that part of New York from whence many of its settlers had come. The name originated with the Chenussio tribe of Indians and means "beautiful valley."

The county is located in the east central part of the Lower Peninsula. Its boundaries are: Saginaw and Tuscola counties on the north, Lapeer county on the east, Livingston and Oakland county on the south, and Shiawassee and Saginaw counties on the west.

The total land area comprises 403,979.92 acres. Of this number, about 390,000 acres are devoted to farms which are wonderfully productive.

The federal census of 1910 gives the county a population of about 64,555.

In 1911, the State Board of Tax Commissioners placed a valuation of $65,385,459 on all taxable lands. There are 177 schools, requiring 380 teachers, and a total of 11,436 students in attendance.

The county has 19 banks, 2 daily and 9 weekly newspapers, excellent telephone, telegraph and rural mail service.

Flint is the judicial seat of the county, also the largest city. Population 38,550 (census 1910). This city has had a wonderful growth, showing an increase in population during the last decade of about 25,000. It has an area of 12 square miles and is located on both banks of the Flint river, 34 miles from Saginaw, 49 from Lansing and 68 from Detroit. It has excellent facilities for the shipment of the products of its factories. It is on the Grand Trunk and Pere Marquette Rys., also the Detroit United Electric, and the Saginaw and Flint Electric Rys.

The city is laid out with fine, wide and beautifully shaded streets, is lighted by electricity and gas, has a water works plant valued at $775,000, has 70 miles of water mains, a thoroughly equipped fire department, 15 acres of parks, a police department, 16 public schools employing 150 teachers, 25 churches, 3 hospitals, 12 hotels, efficient sewer system, electric street car system, a public library, a new $125,000 Y. M. C. A. Bldg, a $130,000 Masonic Temple, a new city hall, a $100,000 court house, a $75,000 post-office, 5 banks, a $110,000 high school, theatres, a daily newspaper and two weeklies.

Flint is the home of the Michigan school for the deaf which is surrounded by 200 acres of beautifully laid out grounds.

It is also the location of one of the largest automobile plants in the world, 3 other growing automobile plants, and an immense quantity of vehicles of almost every description are manufactured. Other industries include an electric stove plant, a steel spring plant, an automobile parts plant, automobile carburetor plant, saw and planing mills, flour mills, gasoline engine works, and plants for the manufacture of axles, wheels, carriage hardware, auto bodies, varnish, paint, electric and gas fixtures, pumps, cigars, brooms, cigar boxes, rugs, paper, brick, boilers, mattresses, ladders, woolen goods, potash, show cases, furniture, heaters, etc.

Fenton located on the Grand Trunk Railway, sixteen miles south of Flint and with a population of about 2,500, is the next largest town of the county. It has churches of several denominations, fine

high school building, opera house, good hotels, two banks, city hall and fire station and municipally owned water works and electric light plant. Its principal industries include a screen door factory, water works, machinery factory, cement works, flour mill, creamery, carriage and wagon works, foundry and machine shop, cheese factory and two grain elevators. It is situated in a rich agricultural section and in the vicinity of several attractive lakes, including Long Lake, which is surrounded by summer cottages and with which Fenton is connected by an electric railway.

The other principal towns of the County are Flushing, Clio, Davidson, Mount Morris, Montrose, Linden, and Gaines, all of which are located in a highly productive agricultural section and from which grain, hay, fruit, potatoes and other farm products are largely shipped.

The principal transportation facilities of the county are the Pere Marquette, Grand Trunk and the Michigan Central Railways; Detroit United Traction Co., and the Saginaw and Flint Ry. (electric).

GLADWIN COUNTY.

Gladwin county was laid out in 1831 and was organized in 1855. It was named in honor of Major Henry Gladwin, who was in command of Fort Detroit during the Indian war.

It is located in the northeast central part of the Lower Peninsula. Is bounded on the north by Roscommon and Ogemaw counties, on the east by Arenac and Bay counties, on the south by Midland county and on the west by Clare county.

The total land area is 330,764.78 acres. Of this number, about 130,000 acres are in farms.

The population is about 8,413 (federal census 1910).

In 1911, the State Board of Tax Commissioners placed a valuation of $4,303,873 on all taxable land in the county.

There are 61 schools, an enrollment of 2,477 children, furnishing positions for 86 teachers.

The county has 3 banks, 2 weekly newspapers, also telephone, telegraph and rural mail service.

Gladwin is the county seat, also the largest city. Has a population of about 1,200. It is located on the Michigan Central Railroad and on the Cedar river, 47 miles northwest of Bay City.

It is lighted by electricity, has water works, excellent sewerage, churches of the Episcopal, Free Methodist, Catholic, Methodist and Presbyterian denominations, a $20,000 public school, an opera house, 2 banks, saw, planing and shingle mills, flour mills, basket factory, electric lighting plant and a weekly newspaper.

Beaverton, a thriving community in Gladwin county, has a population of about 500. It is located on the Pere Marquette Railroad at the confluence of the middle, north and south branches of the Tobacco and Cedar rivers, 9 miles south of Gladwin and 52 northwest of Saginaw. It is lighted by electricity, has a good water works system, churches of several denominations, a graded public school, opera house, a bank and a weekly newspaper.

Transportation facilities of the county are the Michigan Central and Pere Marquette Railroads.

GOGEBIC COUNTY.

Gogebic county was laid out and organized in 1887 and was named for the Gogebic Iron district. It is also probable that the name was taken from Lake Agogebic which is partly in this county and partly in Ontonagon county.

It is located in the extreme western part of the Upper Peninsula. It is bounded on the north by Lake Superior and Ontonagon county, on the east by Ontonagon and Iron counties, on the south by Wisconsin, and on the west by Wisconsin.

The total land area of the county is 712,032.76 acres. Of this number, about 15,000 acres are in farms.

The valuation of all taxable property, as is estimated by the State Board of Tax Commissioners in 1911, is $56,467,012.

The total population of the county is about 23,333 (1910 census).

This county has a good school system, there being 48 schools, attended by 5,420 children, and requiring 195 teachers.

There are 4 banks and 3 weekly newspapers. Good telephone and telegraph service is found in the county.

Bessemer is the capital city of the county and has a population of about 4,500. It is located on the Duluth South Shore and Atlantic, The Minneapolis St. Paul and Sault Ste. Marie, and the Michigan & Northwestern Railways, 47 miles east of Ashland, Wisconsin.

It is the center of the famous Gogebic Iron Range, with many large producing mines in the immediate vicinity.

The city has electric light, water works, churches of the German Evangelical, Catholic, Methodist, Presbyterian, and Swedish Evangelical denominations, fine school facilities, including a new high school building, costing about $45,000, a $50,000 court house, a public library, an opera house, city hall, a bank, and a weekly newspaper.

Other cities of importance include Ironwood and Wakefield.

Ironwood is the largest city in the county and has a population of about 13,000. It is located on the Chicago & Northwestern, and the Minneapolis St. Paul and Sault Ste. Marie Railroads, and on the Montreal River, a small stream which forms the boundary line between the States of Michigan and Wisconsin.

Iron mining is the chief industry, there being within the city's limits, several large iron mines producing the highest grade Bessemer ore found in this country.

The city is lighted by electricity, has water works, fire department,opera house, 2 hospitals, a bank, good hotels, churches of the Swedish Lutheran, Methodist Episcopal, Presbyterian, Swedish Baptist, Swedish Mission, Swedish Methodist, Finnish, and Catholic denominations, 10 school buildings, a manual training school, erected at a cost of about $30,000, a public library and 2 weekly newspapers.

Wakefield is located on the Chicago & Northwestern Railroad, 6 miles east of Bessemer. Has Lutheran, Methodist, and Catholic churches and a bank. Iron mining is the chief industry throughout the county.

The shipping facilities of the county are the Chicago & Northwestern, Duluth, South Shore and Atlantic, Minneapolis St. Paul & Sault Ste. Marie Rys., and the Ironwood & Bessemer Railway & Light Co.

GRAND TRAVERSE COUNTY.

Grand Traverse county was laid out in 1840 and was then called Omeena, taken from the Indian language and meaning "the point beyond." Later, in 1851, the county was organized and the name changed to that which it now bears. The county takes its name from the bay upon which it borders.

It is located in the northwestern part of the Lower Peninsula, and is bounded on the north by Leelanau county, Grand Traverse Bay and Antrim county, on the east by Kalkaska county, on the south by Wexford county and on the west by Benzie county.

The total land area of the county is 299,277.93 acres. Of this number, about 178,000 acres are devoted to farms which are wonderfully productive.

The population is 23,784 (federal census 1910).

In 1911, the State Board of Tax Commissioners placed a valuation of $15,056,946 on all taxable lands.

The county has a good school system. There are 73 school, employing 156 teachers and an enrollment of 5,126 students.

There are 6 banks, 1 daily and two weekly newspapers, also good telephone, telegraph, and rural mail service.

Traverse City is the largest city and the judicial seat of the county. It has a population of about 12,500, is located on the Pere Marquette, Grand Rapids & Indiana, and the Manistee and Northeastern

Railroads, at the head of the west arm of Grand Traverse Bay, where the Boardman river, its chief tributary, enters the bay.

This city has long been famous as a summer resort. It is also the gateway to the Grand Traverse region, a region of one of the most beautiful and healthful summer places of recreation in the northwest. The country surrounding Traverse City has long been settled and is rich in farming and fruit lands. The Northern Michigan Asylum is located here.

Prominent manufacturing interests consist of one of the largest oval wood dish factories in the world, as well as one of the largest basket factories in the State, potato implement factory, canning factory, candy factory, iron works, flour and feed mills, tanneries, brick and tile works, foundry and machine shops. Sash doors, electrical appliances, gasoline engines, boats, chairs, cigar boxes, refrigerators, lumber, motor boats, flooring, caskets, shoes, brick machines, carriages, wagons, vinegar, etc., are also manufactured.

The religious and educational interest are represented by 23 church organizations, a high school and four ward schools.

There are 3 banks, a city library, a hospital, theatres and 2 newspapers. The city is lighted by electricity and gas, has a good water works plant, good police and fire departments, and well paved streets. In the immediate vicinity one finds good brook trout and bass fishing.

Other thriving communities of the county are Fife Lake, and Kingsley.

Kingsley is located on the Grand Rapids & Indiana Railroad, 18 miles southeast of Traverse City. Has Baptist, German Lutheran, and Methodist churches, a bank, flour and planing mills, electric light and water works.

Fife Lake is located on the body of water from which it takes its name, 26 miles southeast of Traverse City and 67 southwest of Petoskey. It is a station on the Grand Rapids & Indiana Railroad and is a shipping point for a large lumbering and potato growing region. Has churches of several denominations, good public school system, 2 hotels, a bank and a weekly newspaper.

The principal transportation facilities of the county are the Pere Marquette, Grand Rapids & Indiana, and the Manistee & Northeastern Railroads, also the Northern Michigan Trans. Co.

GRATIOT COUNTY.

Gratiot county was laid out in 1831 and was organized in 1855. It was named in honor of Chas. Gratiot who, as captain and engineer, built Fort Gratiot at the head of the St. Clair river.

This county is located in the central part of the Lower Peninsula, and is bounded on the north by Isabella and Midland counties, on the east by Saginaw county, on the south by Clinton county, and on the west by Montcalm county.

The total land area is 364,623.63 acres, of which about 335,000 are in splendid farms.

The population is 28,820 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $26,936,121.

There are 135 schools which were attended by 6,544 pupils last year, requiring the services of 230 teachers.

The county has 17 banks and 11 weekly newspapers.

Good telegraph, telephone, and rural mail service is found throughout the county.

Ithaca is the capital city of the county and has a population of about 2,000. It is located on the Ann Arbor Railroad, 42 miles north of Lansing. It does a big grain and produce business and is the central supply station for a large and fertile agricultural area. There are churches of the Adventist, Baptist, Methodist, Free Methodist, and Presbyterian denominations, also a splendid school system, 4 banks, good hotels, a $100,000 court house, a sewerage system costing about $60,000, a $45,000 electric light and pumping plant. Has roller flouring mills, 3 grain elevators, a large creamery, foundry and machine shop, beet lifter factory, brick and tile works. There are two live weekly newspapers published here.

Other towns of importance include Alma, (pop. 3,000), and St. Louis, (pop. 2,000), also Ashley and Breckenridge.

Alma is located on the Pine river and on the Pere Marquette and Ann Arbor Railroads, 8 miles south of Ithaca and 37 miles west of Saginaw.

The city has paved streets and the Boulevard system of street lighting. It has an electric light and water plant, modern sewerage system, good fire department, 2 banks, first class hotels, an opera house and 4 newspapers.

There are churches of several denominations, and a splendid public school system.

The Alma College is located here.

Prominent industries of the city include a large sugar factory, automatic gasoline engine works, foundry and machine shop, one of the largest creameries in the State, and manufactories of hay presses, overalls and jackets, skirts, heaters, bee smokers, wall board and roofing, chemicals, cement blocks, etc.

The principal transportation facilities of the county are the Pere Marquette, Grand Trunk, and the Ann Arbor Railroads.

HILLSDALE COUNTY.

Hillsdale county was laid out in 1829, and was organized in 1835. The county was well named and describes in a word the condition of the surrounding country.

It is located in the central part of the southern tier of counties, in the Southern Peninsula, and is bounded on the north by Calhoun and Jackson counties, on the east by Lenawee county, on the south by Indiana and on the west by Branch county and Indiana.

This county has a total land area of 386,087.50 acres. Of this number about 375,000 acres are devoted to farms which are wonderfully productive.

The population is 29,673. (Federal census).

In 1911, the State Board of Tax Commissioners placed a valuation of $34,090,892 on all taxable lands.

The school system is equal to that of any of the larger counties. There are 171 schools, requiring the services of 273 teachers, and last year's records show an enrollment of 5,928 students.

The county has 12 banks, 1 daily and 9 weekly newspapers. Good telegraph, telephone, and rural mail service is found throughout the county.

Hillsdale is the judicial seat and the largest city of the county. It has a population of about 5,000.

It is located on the St. Joseph river and on the Lake Shore and Michigan Southern Railroad, 29 miles south of Jackson and 91 southwest of Detroit. The city is lighted by electricity and gas, has water works, wide and well shaded streets, good fire department, sanitary sewerage system, first class hotels, opera house, 3 banks and a daily newspaper.

There are churches of the Adventist, Baptist, Episcopal, Free Will Baptist, Lutheran, Methodist, Presbyterian, Universalist, and Catholic denominations, an up-to-date public school system, public library, a postoffice building costing about $65,000, City Hall costing about $45,000. This is the home of Hillsdale College, situated upon one of the most sightly spots in the State.

There are a number of prosperous industrial enterprises, including planing mills, flouring mills, gasoline engine works, glove and mitten factories, gas plant, shoe factory, truck and wagon works, wheel works, screen door works, door rail and door hanger factory, creamery, tannery, handle factory, etc.

Other enterprising towns include Camden, Jonesville, Litchfield, Montgomery, North Adams and Reading, the largest of which are Jonesville (pop. 1,400) and Reading (pop. 1,100).

Jonesville is located on the St. Joseph river and on the Lake Shore & Mich. Southern Railroad, 4½ miles west of Hillsdale and 25 miles from Jackson. It is lighted by electricity, has water works, good educational facilities, a public library, a theatre, a public hall, a bank and 2 weekly newspapers. There are churches of several denominations.

Reading is located on the Lake Shore & Mich. Southern Ry., 10 miles southwest of Hillsdale and 36 miles from Jackson. It is supported by a rich agricultural section and is an important shipping point

for wheat, corn, wool, fruit and produce. Has Baptist, Free Will Baptist, Methodist and Presbyterian churches, a graded public school, opera house, a bank, tanneries, a robe factory, flour and saw mills, chair factory, feed and grist mill and a weekly newspaper.

The principal transportation facilities of the county are the Lake Shore and Michigan Southern, and the Cincinnati Northern Railroads.

HOUGHTON COUNTY.

Houghton county was laid out and organized in 1845, and was named in honor of Douglas Houghton, first State Geologist of Michigan. It is bounded on the north by Keweenaw county and Lake Superior, on the east by Keweenaw Bay and Baraga county, on the south by Iron county and on the west by Ontonagon county and Lake Superior.

The total land area of the county is 647,466.14 acres, of which about 95,000 acres are devoted to farms.

The population is 88,098 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $117,626,097.

The educational advantages offered, are equal to those of any other county throughout the State. There are 135 schools, 19,169 students in attendance, requiring the services of 668 teachers.

There are 13 banks, 5 daily and 8 weekly newspapers. The county also has telephone, telegraph and rural mail service.

Houghton is the capital city of the county and has a population of about 5,500. It is located on the Duluth South Shore & Atlantic, the Copper Range, and the Mineral Range Railroads, and on the south shore of Portage lake, 14 miles from the mouth of Portage river, 10 from Lake Superior on the west and 94 northwest of Marquette.

It is in the midst of the Lake Superior copper region, a strip of country 4 to 6 miles in width, extending from southwest to northeast, through the entire length of Keweenaw peninsula and beyond. This range is very rich in native copper, and some of the most productive mines in the world are located in the vicinity of the town.

Houghton contains one of the finest court houses in the Upper Peninsula, a city hall, Catholic, Episcopal, Methodist Episcopal, and Presbyterian churches, 2 banks, daily and weekly newspapers, and a public school building costing $60,000. The Michigan College of Mines is also located here.

Calumet is the largest city in the county and has a population of about 30,000. It is located on the Mineral Range, the Copper Range, the Keweenaw Central, and the Hancock & Calumet Railroads, 14 miles north of Houghton and 4 from Lake Linden, its shipping point by water.

The city is well lighted by electricity, has good police and fire departments, excellent drainage and sewer system, two systems of water works, opera house, handsome parks, 2 hospitals, first class hotels, splendid school system, handsome churches, 3 banks, 2 daily and 3 weekly newspapers.

Calumet is the site of the famous Calumet & Hecla Copper mine. This mine is one of the richest in the world. The machinery used for elevating the copper rock to the surface and for pumping and condensing air for the drills is all on an immense scale and of the most perfect design.

The stamp mills and furnaces at Lake Linden are said to be the largest in the world.

Other important cities of the county include Laurium (pop. 9,000), Hancock, (pop. 9,000), Hubbell, (pop. about 1,200), and Lake Linden, (pop. about 2,500).

The transportation facilities of the county are the Duluth South Shore & Atlantic, Copper Range, Mineral Range, Keweenaw Central, Chicago Milwaukee & St. Paul Railroads, Houghton Traction Co. (electric), U. S. & Dom. Trans. Co., Erie & Western Trans. Co., Northern S. S. Co., and the Mutual Transit Co.

HURON COUNTY

Huron county was laid out in 1840 and was organized in 1859. The county was named for the lake bordering on the north, east and west, and the lake in turn was so called from a tribe of Indians called the Hurons, which lived there.

The county is located in the eastern part of the Lower Peninsula in what is known as the "Thumb" district. It is bounded on the north by Lake Huron, on the east by Lake Huron, on the south by Tuscola and Sanilac counties, and on the west by that part of Lake Huron known as Saginaw Bay and by Tuscola county.

The total land area is 536,982.63 acres. Of this number, about 472,000 acres are devoted to farms, some of which are of the best in the eastern part of the State.

The total population of the county is 34,758 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $24,866,457 on all taxable land.

There are 126 schools which were attended by 8,475 pupils last year, requiring 222 teachers.

The county has 17 banks and 11 weekly newspapers. Also good telegraph, telephone and rural mail service throughout.

Bad Axe is the judicial seat of the county and has a population of about 2,000. It is located on the Pere Marquette and Grand Trunk Railroads, 63 miles northwest of Port Huron. It has Baptist, Episcopal, German Evangelical, Mennonite, Methodist, Presbyterian, and Catholic churches, a $40,000 high school, water works, opera house, good hotels, a $40,000 court house, 2 banks and 2 newspapers.

This is the trading center for a productive agricultural section and large quantities of grain, hay, seed, produce and live stock are shipped.

Harbor Beach has a population of about 2,000, and is located on the shore of Lake Huron and the Pere Marquette Railroad, 18 miles east of Bad Axe and 60 miles above Port Huron. It is a great grain market for the whole of the Huron Peninsula. There are Baptist, Free Methodist, Lutheran, Methodist Episcopal, Presbyterian and Catholic churches, good schools, a library, an opera house, 3 public halls, 2 banks, water works, fire department, electric lighting plant, and two live newspapers. Manufactories consist of flour, corn starch, wheat starch, macaroni, food pastes, cement tile, building blocks, and butter. As a summer resort, the surroundings are splendid.

Other towns of the county are Caseville, Elkton, Kinde, Owendale, Pigeon, Port Austin, and Port Hope, whose shipments consist largely of wheat, cattle, hay, sugar beets and flax.

The principal transportation facilities of the county are the Grand Trunk, Pere Marquette, Pontiac Oxford & Northern, Michigan Central, and the Detroit and Huron Railroads, also the Detroit and Cleveland Nav. Co.

INGHAM COUNTY.

Ingham county was laid out in 1829 and was organized in 1838. The county was named in honor of Secretary of Treasury Sam'l D. Ingham.

This county is located in the south central part of the Lower Peninsula and is bounded on the north by Clinton and Shiawassee counties, on the east by Livingston county, on the south by Jackson county and on the west by Eaton county.

The total land area is 355,272.91 acres, of which about 334,000 acres are devoted to splendid farms.

The population is about 53,310 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $56,119,681.

There are 154 schools, requiring 339 teachers, and an enrollment of 8,843 students.

The county has 13 banks, 2 daily and 9 weekly newspapers.

Excellent telegraph, telephone and rural mail service is found in every community throughout the county.

Mason is the county seat and has a population of about 2,000. It is located on the Michigan Central Railway, and on the Michigan United Traction (electric), 12 miles south of Lansing and 25 north of Jackson.

It is lighted by electricity, has water works and sewerage system, fire department, a fine court house, a good public school system, school library, an opera house and 2 weekly newspapers.

The country surrounding is rich and fertile and many wonderfully productive farms are found. Live stock, fruit, grain and farm produce are largely shipped.

Lansing, the Capital city of the State, has a population of about 40,000. It is located on the Grand Trunk, Michigan Central, the Lake Shore & Michigan Southern, and Pere Marquette Railroads, also the Michigan United Traction, (electric), 37 miles north of Jackson and 88 northwest of Detroit.

The city has beautiful, wide and well paved streets, splendid water works system, is lighted by electricity, excellent police and fire departments, electric light and gas plants, theatres, first class hotels, 16 public and 5 parochial schools including the new high school just erected at a cost of over $125,000, a public library costing about $35,000, 31 churches of most all denominations, a Young Men's Christian Association, a Young Women's Christian Association, 2 daily and 3 weekly newspapers, 4 banks, etc.

The manufacture of automobiles forms the chief industry of Lansing, there being two large automobile plants located here. Other industries include auto wheel works, auto body works, wheelbarrow factory, several gasoline engine plants, cut glass factories, cigar factories, candy factories, machine shops, foundries, etc.

The State Capitol, a magnificent structure in the classic style of architecture, built of stone, brick and iron, and costing complete, $1,510,130.59, was begun in 1872 and finished in 1878. It occupies a beautiful, elevated site, consisting of four blocks, in the heart of the city.

The Michigan Agricultural College, located 3 miles east of the city, on a farm of 684 acres, divided by the Cedar river, is a great attraction to all who visit the city.

The State Industrial School for Boys is located in the eastern part of the city, on a farm of 260 acres.

The Michigan School for the Blind is located in the northwest part of the city, on fine grounds of 45 acres.

A post office costing $150,000 has been erected.

Other towns of the county include Leslie, (pop. 1,200), Lyons, (800 pop.), and Williamston, (pop. 1,200).

The country tributary to these towns is among the richest and most productive sections in the State. The soil is adapted to many kinds of grains, fruits, vegetables, etc., and stock raising is an important industry.

The transportation facilities of the county include the Grand Trunk, Michigan Central, Pere Marquette, Lake Shore & Michigan Southern Railroads, and the Michigan United Traction Co.

IONIA COUNTY.

Ionia county was laid out in 1831 and was organized in 1837, and was so named for the ancient Greek district on the west shore of Asia Minor, which for several centuries was famous for its commerce, wealth, high civilization and social development.

The county is located in the west central part of the Lower Peninsula. It is bounded on the north by Montcalm county, on the east by Clinton county, on the south by Barry and Eaton counties and on the west by Kent county.

The total land area is, 366,291.10 acres. Of this number, about 351,500 acres are devoted to splendid farms.

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $33,657,709.

The population is 33,550 (1910 census).

The county has 150 schools, furnishing positions for 259 teachers, and an enrollment of 5,722 students.

There are 10 banks, 2 daily and 10 weekly newspapers.

Good telegraph, telephone and rural mail service is found throughout the county.

Ionia is the judicial seat and the largest city of the county. It has a population of about 5,500. It is located among the hills along the Grand river, 34 miles east of Grand Rapids, and 38 northwest of Lansing. It is a station on the Pere Marquette, and Grand Trunk Railways. The city's location on the hills, following the general line of the river and extending far back, makes it one of the most picturesque and attractively arranged places in the State.

There are 8 churches, 3 public school buildings, a $50,000 parochial school building, 2 banks, a $30,000 armory, public library, a fire hall, a $15,000 city hall, opera house, municipally owned water works, handsome court house, electric lighting and water power plant, gas plant, a $65,000 post office, 2 daily and two weekly newspapers.

Among the propsperous industrial establishments are found clothing and skirt factories, auto body factory, gasoline engine and implement works, flour mills, planing mills, pottery, Pere Marquette shops, glove factory, furniture factory, washing machine factory, brick and tile works, automobile plant, cigar factories, machine shop, grain elevator, creamery, 2 monument works, etc.

Four miles to the southwest is the Ionia County House, to the west of the city is the Michigan Reformatory, and to the south, the State Hospital.

Ionia is the receiving and distributing point for a rich agricultural section and is one of the largest bean shipping points in the United States.

Belding has a population of about 5,000. It is located on the Pere Marquette Railroad, and on the Flat River, 15 miles northwest of Ionia. It has churches of several denominations, excellent schools, electric light plant, opera house, 3 banks, first class hotels and two live newspapers.

Manufacturing industries consist of 4 silk mills, one basket factory, a canvas coal bag factory, shoe factory, a paper box factory, sash, door and blind factory, a saw mill, feed mill, refrigerator factory, etc.

Other important towns of the county are Portland, Hubbardston, Lake Odessa, Muir, Pewamo and Saranac. The surrounding country produces beans, grain, and fruit in abundance.

The principal transportation facilities of the county are the Pere Marquette, and the Grand Trunk Railroads.

IOSCO COUNTY.

This county was laid out in 1840, and was then called Kanotin, the name of a famous Ottawa chief. During the same year the name was changed to that which it now bears, and means "water of light." The county was finally organized in 1857.

It is located in the northeastern part of the Lower Peninsula, is bounded on the north by Alcona county, on the east by Lake Huron, on the south by Arenac county, and on the west by Ogemaw county.

The total land area of the county is 354,821.51 acres, of which about 115,000 acres are devoted to good farms.

The population of the county is about 9,753 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $3,573,893.

Educational advantages offered in Iosco county are equal in many respects to those of the larger counties. There are schools, requiring 69 teachers, and 2,173 students in attendance.

The county has 6 banks and 3 weekly newspapers.

Good telegraph, telephone and rural mail service is to be found in the county.

Tawas City is the judicial seat of the county and is located on the Detroit & Mackinac Ry., at the mouth of the Tawas river, on the indentation of Saginaw Bay, known as Tawas Bay, one of the best

natural harbors on Lake Huron, 60 miles by rail from Bay City. Has Baptist, 2 German Lutheran, Methodist and Presbyterian churches, excellent public schools, 2 Lutheran schools, a county normal school, a public library, a bank, a court house, 2 grain elevators and a weekly newspaper. The shops of the Detroit and Mackinac Railroad are also located here. The population of the town is about 1,300.

East Tawas is the largest town in the county and has a population of about 1,500. It is located on the Detroit & Mackinac Ry., and on the north shore of Tawas Bay, 1½ miles above Tawas City and 61 by rail from Bay City.

It is lighted by electricity, has water works, fire department, churches of the Baptist, Episcopal, Methodist, Presbyterian and Catholic denominations, good schools, an opera house, 2 banks and a weekly newspaper.

Other thriving towns of the county include Au Sable, Oscoda, and Whittemore.

The leading transportation facilities of the county are the Detroit and Mackinac, and the Au Sable & Northwestern Railroads, the Detroit & Cleveland Nav. Co., and the Erie and Michigan Ry. & Nav. Co.

IRON COUNTY.

Iron county was laid out and organized in 1885. It was so named because of the heavy iron deposits which are found throughout.

It is located in the southwestern part of the Upper Peninsula, is bounded on the north by Houghton and Baraga counties, on the east by Marquette and Dickinson counties, on the south by Wisconsin and on the west by Gogebic and Ontonagon counties.

The total land area of the county is 760,143.11 acres. Of this number, about 30,000 acres are now devoted to farms.

The population is 15,164 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $30,314,143 on all taxable land.

The county has 41 schools, furnishing positions for 141 teachers, and last year's records showed a total of 3,807 students in attendance.

There are 3 banks and 2 weekly newspapers, also telegraph and telephone service in the county.

Crystal Falls is the largest city, also the county seat. It has a population of about 3,500. The city is located on the Paint river and on the Chicago & Northwestern, and the Chicago Milwaukee & St. Paul Railroads, 18 miles east of Iron River, and 17 from Florence, Wis.

In the vicinity are 29 iron mines. The city owns and operates its own water works and electric light plant, has a good fire department, sanitary sewerage, a good public school system, including a high school erected at a cost of about $65,000, churches of the Episcopal, Methodist, Presbyterian, Baptist, Catholic, Swedish and Finnish Lutheran and Swedish Methodist denominations, a $60,000 court house, an opera house, a bank and a weekly newspaper.

Iron River has a population of about 3,000. It is located on the Chicago & Northwestern Railroad, 17 miles west of Crystal Falls. It has churches of the following denominations: Episcopal, Methodist, Presbyterian, Swedish Baptist, Swedish Lutheran and Catholic, a good school system including a high school erected at a cost of about $35,000, water works, fire department, a bank and a weekly newspaper.

The principal transportation facilities of the county are the Chicago Milwaukee & St. Paul, and the Chicago & Northwestern Railroads.

ISABELLA COUNTY.

Isabella county was laid out in 1831 and was organized in 1859, and was named in honor of Queen Isabella of Spain.

It is located in the central part of the Lower Peninsula and is bounded on the north by Clare county,

on the east by Midland county, on the south by Montcalm and Gratiot counties and on the west by Mecosta county.

The total land area is 368,746 acres, of which about 300,000 acres are devoted to farms which are very productive.

The federal census of 1910 gives the county a population of 23,029.

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $16,028,215.

The school system is equal to that of any of the larger counties, there being 113 schools, requiring the services of 152 teachers, and an attendance of 4,806 students.

The county has 8 banks and 4 weekly newspapers. Good telephone, telegraph and rural mail service is to be had in every community.

Mount Pleasant, the capital city of the county, contains about 4,500 people. It is located on the Chippewa river, and on the Ann Arbor, and Pere Marquette Railroads, 53 miles northwest of Saginaw and 149 from Detroit. The city has an excellent system of public improvements, is lighted by gas and electricity, a good sewerage and drainage system, a good water works, fire department, paved streets, a 40 acre park, opera house, 2 banks, first class hotels, a fine court house, public library, 2 weekly newspapers, churches of the Adventist, Baptist, Disciples, Episcopal, German Lutheran, Methodist, Presbyterian, Unitarian and Catholic denominations, splendid school system, etc.

The city's industrial interests include among others a milk condensing plant, veneer works, chicory factory, calcium works, cigar factories flour mill, planing mill, grain elevators, light and fuel plant, hub and lath mill, foundry, etc. The surrounding country is rich and productive and produces a wide diversity of crops.

Shepherd has a population of about 1,000. It is located on the Ann Arbor Railroad, and on Salt river, 7 miles southeast of Mount Pleasant. It has Baptist, Christian, Methodist, United Brethren and Catholic churches, a graded public school, an opera house, 2 banks and a weekly newspaper.

The principal transportation facilities of the county are the Ann Arbor, and Pere Marquette Railroads.

JACKSON COUNTY.

Jackson county was laid out in 1829 and was organized in 1832, and was named in honor of President Andrew Jackson.

It is located in the south central part of the Lower Peninsula, and is bounded on the north by Eaton and Ingham counties, on the east by Washtenaw county, on the south by Hillsdale and Lenawee counties and on the west by Calhoun county.

The total land area of the county is 453,452.12 acres. Of this number, about 423,000 acres are in splendid farms.

The population is 53,426. (1910 census.)

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $53,728,238.

The county has 172 schools, attended by 8,831 students, requiring 345 teachers.

There are 13 banks, 2 daily and 8 weekly newspapers.

All parts of the county are provided with telephone, telegraph and rural mail service.

Jackson is the largest city, also the judicial seat of the county. It is located on Grand River, and on the Michigan Central, Lake Shore & Michigan Southern, Grand Trunk, Cincinnati Northern Rys., also the Michigan United Traction, and the Detroit United Railway (electric). The Michigan Central car shops are located here.

The city has an area of 9 square miles, 10 m les of paving, 54 miles of public sewers, 6 public parks, comprising 58 acres, a water works plant valued at $900,000, 85 miles of water mains, well equipped fire department, efficient police department, 32 churches, 17 public school building, 3 sanitariums, a

city hospital, 2 daily and 2 weekly newspapers, a library, 5 banks, 6 theatres, first class hotels. The State Penitentiary is also located here.

The manufacturing industries are many and include acetylene gas generators, advertising sign boards, agricultural tools, aluminum castings, antiseptic cans, automatic machinery, automobiles, automobile accessories, bank and office fixtures, boilers, blank books, carriages and wagons, cement mixers, flour, flour mill machinery, furnaces, gasoline engines, glass, mirrors, machine tools, pumps, etc.

A large and very successful industry is the cultivation of celery, onions, and small fruits.

Other towns of the county include Grass Lake, Springport, Brooklyn, Concord, Hanover, and Parma. Their shipments consist largely of grain, apples, potatoes and live stock.

The transportation facilities of the county are the Grand Trunk, Michigan Central, Lake Shore and Michigan Southern, Cincinnati Northern Railroads, and the Detroit United Railways Company, and the Michigan United Traction Company.

KALAMAZOO COUNTY.

Kalamazoo county was laid out in 1829 and was organized in 1830. It takes its name from the river which was called Ke-Kala-mazoo, which name is said to be of Indian derivation and interpreted by some as meaning "bright, sparkling water."

It is located in the southwestern part of the Lower Peninsula and is bounded on the north by Allegan and Barry counties, on the east by Calhoun county, on the south by St. Joseph county and on the west by Van Buren county.

The total land area is 359,234.70 acres, of which about 332,000 acres are in beautiful farms.

The population is 60,427 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $73,098,142 on all taxable lands.

There are 138 schools which were attended by 10,642 pupils last year, requiring the services of 415 teachers.

The county has 13 banks, 2 daily and several weekly newspapers. Telephone, telegraph and rural mail service provide for the necessities and add to the comforts of life.

Kalamazoo is the county seat, also the largest city, having about 45,000 inhabitants. It is located on the Michigan Central, Grand Trunk, Lake Shore & Michigan Southern, Grand Rapids & Indiana, Chicago Kalamazoo & Saginaw, and the Kalamazoo Lake Shore & Chicago Railroads, also the Michigan United Traction Co. (electric), 144 miles west of Detroit and 49 south of Grand Rapids.

The city has an excellent water system, police and fire departments, municipal electric lighting plant, gas plant, sanitary sewerage system, 22 miles of brick and asphalt pavement, hospitals and sanitariums, first class hotels, beautiful theatres, several parks, including more than 85 acres, splendid school system,—the Western State Normal School, a new million dollar institution, is located here, a beautiful public library, about 42 churches representing the leading denominations, 4 banks, 2 daily and 7 weekly newspapers.

The principal industries include manufactories of book paper, corsets, windmills and tanks, gas lamps and heaters, and regalia for fraternal organizations. There are 6 paper mills in the city and immediate vicinity, 41 metal working plants, vehicle works, and numerous plants manufacturing blank books, playing cards, tablets and other paper goods. Kalamazoo is known as the world's center in the growth of celery and peppermint.

Vicksburg is located on the Portage River, at the intersection of the Grand Trunk, and the Grand Rapids & Indiana Rys., 13 miles south of Kalamazoo, 23 southwest of Battle Creek and 62 south of Grand Rapids. The population is about 2,000.

The city is lighted by electricity, has water works, opera house, good hotels, churches of several denominations, a union school, two banks, and two weekly newspapers.

The more important industrial interests include a paper mill, flour mill, 2 gasoline engine works,

bagging machine factory, cement block works, engine governor works, clothing factory, creamery, etc. Vicksburg is the receiving and shipping point for large quantities of grain, farm produce, wool and flour.

Other towns of importance are Galesburg, where considerable blooded stock is raised; Augusta, Climax and Schoolcraft, all in good agricultural section.

Transportation facilities of the county include the Lake shore & Michigan Southern, Grand Rapids & Indiana, Grand Trunk, Michigan Central, and the Chicago Kalamazoo & Saginaw Railroads, and the Michigan United Traction Co. (electric).

KALKASKA COUNTY.

Kalkaska county was laid out in 1840, and was at that time called Wabassee, the name of a Pottawatomie chief. In 1843 the name was changed to Kalkaska, and later in 1871 the county was finally organized.

This county is located in the northern part of the Lower Peninsula. It is bounded on the north by Antrim county, on the east by Crawford county, on the south by Missaukee county and on the west by Grand Traverse county.

The total land area of the county is 359,669.30 acres. Of this number, about 81,000 acres are already devoted to good farms.

The population is 8,097 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $8,082,745.

The county has 55 schools, supplying positions for 77 teachers, and last year's report showed a total of 1,972 children in attendance.

There are 2 banks and 1 weekly newspaper, and good telegraph, telephone and rural mail service is to be found.

Kalkaska is the largest town, also the judicial seat of the county. It is located on the Pere Marquette, and the Grand Rapids and Indiana Railroads, 137 miles north of Grand Rapids. It has electric lights, good water works system, an up-to-date school system, churches of the Congregational, Methodist, Baptist, Christian Science and Disciples denominations, a $17,000 court house, a light and power plant, 2 banks and 2 weekly newspapers. The industries include a saw mill, cant hook works, grist and planing mill, cycle works, etc. Lumber, ginseng, live stock, farm and dairy products are shipped.

Principal transportation facilities of the county are the Pere Marquette, Grand Rapids & Indiana, and the Manistee and Northeastern Railroads

KENT COUNTY.

Kent County was laid out in 1831 and was organized in 1836, and was named in honor of James Kent, a well known expounder of the principles of the American Law.

The county is located in the west central part of the Lower Peninsula and is bounded on the north by Newaygo and Montcalm counties, on the east by Montcalm and Ionia counties, on the south by Allegan and Barry counties, and on the west by Muskegon and Ottawa counties.

Total land area is 545,815.30 acres, of which about 487,000 acres are in splendid farms.

The population is 159,145 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $187,536,358 on all taxable lands.

The county has 240 schools, an enrollment of 25,958 students, requiring 881 teachers.

There are 22 banks, 3 daily and 22 weekly newspapers.

There is good telegraph, telephone and rural mail service throughout the county.

Grand Rapids, is the judicial seat and the largest city in the county. It is also the second largest city in the State. Population is shown by 1910 census to be 112,571, now estimated at more than 130,000.

It is located at the head of navigation on Grand River, in a rich agricultural section, 30 miles from Lake Michigan, and on the Pere Marquette, Grand Rapids & Indiana, Grand Trunk, Michigan Central and Lake Shore & Michigan Southern Railroads, also several electric lines.

The City has an area of 17.5 square miles, 46 miles of paving 191 miles of public sewers, 195 miles of gas mains, 196 miles of water mains. There are many beautiful parks, covering over 400 acres, 18 theatres and vaudeville house, 31 public homes and hospitals, and about 100 churches representing nearly every denomination. There are 37 public schools, in addition to which are many private and denominational schools, a beautiful public library, beautiful new post office building, an immense water works, police and fire departments, 10 banks, many of which have several branches.

Grand Rapids is one of the largest furniture manufacturing cities in the world and is known the world over as the "Furniture City." A few of the many successful manufacturing industries are, all kinds of furniture, show cases, sticky fly paper, flour and grist mills, gypsum, planing and interior finish mills, printeries, foundry and machine shops, carpet sweepers, vehicles, boots and shoes, hosiery and knit goods, railway construction and repair shops, refrigerators, wood turning and carving, mirrors, and ornamental glass, cigars, copper and sheet metal works, etc. It is estimated that in the manufacture of furniture, the annual output is in excess of $10,000,000.

Grand Rapids is the center of one of the finest producing districts in the entire country. The city affords an excellent home market for the products of many nearby farms and orchards, but solid carload lots of potatoes, beans, peaches, apples, small fruits and greenhouse products are also shipped by the commission men.

Other towns of importance are Caledonia, Cedar Springs, Grandville, Lowell, Sparta, Ada, Rockford and Sand Lake, all in good agricultural sections.

The principal transportation facilities of the county are the Grand Rapids and Indiana, Pere Marquette, Grand Trunk, Michigan Central, Lake Shore & Michigan Southern, Grand Rapids Holland & Chicago and the Grand Rapids Grand Haven & Muskegon Railways, and the Michigan United Traction Co.

KEWEENAW COUNTY.

Keweenaw county was laid out and organized in 1861, and included Manitou and Isle Royal. The name is taken from the Indian word "Ki-wi-wai-ni-ning" meaning a portage or a place where a portage is made.

This county is of peninsular formation and is located in the extreme northern part of the Upper Peninsula. It is bounded on the north, east and west by Lake Superior, and on the south by Lake Superior and Houghton county.

The total land area is 348,468.34 acres. Of this number about 3,000 acres are devoted to farms, although the county is particularly noted for its copper mines.

The population is 7,156. (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $16,784,413.

The school system of the county is good and consists of 15 schools, an enrollment of 1,713 students, requiring the services of 50 teachers.

There is 1 bank and 1 weekly newspaper. The county has good telegraph and telephone service.

Eagle River has a population of about 200, and is the judicial seat of the county. It is located on the north shore of the Keweenaw peninsula on Lake Superior, at the mouth of the stream from which it derives its name. It is 2 miles from Phoenix, the nearest railroad approach. It has a Methodist church. The banking facilities are at Calumet, 16 miles distant.

Ahmeek has a population of about 1,200 and is the largest town in the county. It is 11 miles from Eagle river and $2\frac{1}{2}$ miles from Mohawk.

The principal transportation facilities of the county are the Mineral Range, Keweenaw Central Railroads, and the Houghton Traction Company.

LAKE COUNTY.

Lake county was laid out in 1840 and was first named Aishcum, the name of a Pottawatomie Chief. In 1843 the name was changed. The county was finally organized in 1871. The name Lake is peculiarly unappropriate to this county as it is an inland county and contains but few lakes of any size.

It is located in about the west central part of the Lower Peninsula. Its boundaries are: Manistee and Wexford counties on the north, Osceola county on the east, Newaygo county on the south, and Mason county on the west.

The total land area of the county is 365,393.85 acres. Of this number, about 88,000 acres are now in farms.

The population is 4,934.

In 1911, the State Board of Tax Commissioners placed a valuation of $4,267,298 on all taxable lands.

There are 48 schools, requiring the services of 67 teachers, and an enrollment of 1,237 students last year.

The county has 2 banks, 2 weekly newspapers and good telegraph, telephone and rural mail service.

Baldwin is the county seat, and has a population of about 550. It is located on the Pere Marquette river and on the Pere Marquette Railroad, 74 miles north of Grand Rapids. It has Congregational and Episcopal churches, a graded public school, good hotels, a $10,000 court house and a weekly newspaper. In the immediate vicinity are to be found some of the finest trout streams in Northern Michigan. Live stock, potatoes and huckleberries are shipped.

Luther is the largest town in the county. Population, 900. It is located on the Little Manistee river and on the Manistee and Grand Rapids Railroad, 18 miles northeast of Baldwin. It has churches of Baptist, Christian, Episcopal, Methodist and Catholic denominations, a graded public school, a bank and a weekly newspaper.

Transportation facilities of the county are the Manistee and Grand Rapids, and the Pere Marquette Railroads.

LAPEER COUNTY.

Lapeer county was laid out in 1822 and was organized in 1835. The name was taken from the french word "La Pierre," which means flint stones.

It is located in about the east central part of the Lower Peninsula, and is bounded on the north by Tuscola and Sanilac counties, on the east by Sanilac and Saint Clair counties, on the south by Oakland and Macomb counties and on the west by Genesee county.

Total land area is 423,535.96 acres, of which about 400,000 acres are in fine farms.

The population of the county is 26,033. (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $21,060,841.

The school system in this county is equal in every respect to that of the other counties. There are 135 schools, attended by 5,491 students, supplying positions for 205 teachers.

There are 16 banks and 7 weekly newspapers. Good telephone, telegraph and rural mail service are found throughout the county.

Lapeer is the judicial seat and the largest city in the county, with a population of about 4,000. It is located on the Flint river at the crossing of the Grand Trunk, and Michigan Central Railroads, in the heart of one of the richest and most productive agricultural sections in the State, 46 miles west of Port Huron and 60 north of Detroit.

There are churches of the Episcopal, Baptist, Methodist Protestant, Presbyterian, and Catholic denominations, and public schools which rank among the best in the State. The Michigan Home for the Feeble-Minded and Epileptic is located here on 360 acres of land.

The city is lighted by electricity, has a fine water works system, good fire department, complete

sewerage system, wide and well paved streets, a library, first class hotels, 3 banks, 2 live weekly newspapers, etc.

The manufacturing industries consist of flour mills, stove factory, foundry and machine shops, carriage and wagon works, creamery, etc.

Other thriving towns of the county are Almont, Clifford, Columbiaville, Dryden, Imlay City, Metamora, North Branch, and Otter Lake.

Imlay city is located on the Belle river and on the Grand Trunk Railway, 12 miles east of Lapeer, and 59 north of Detroit. It is lighted by electricity, has water works, fire department, churches of the Congregational, Methodist, Episcopal, Baptist, German Lutheran and Catholic denominations, a $20,000 school, a city hall, opera house, 2 banks and 2 weekly newspapers. The principal exports of the surrounding country are grain, live stock, lumber and farm produce.

The principal transportation facilities of the county are the Grand Trunk, Michigan Central, and the Pontiac Oxford & Northern Railroads.

LEELANAU COUNTY.

Leelanau county was laid out in 1840 and was organized in 1863. The name—according to an Indian legend—means "Delight of Life."

This county is located in the northern part of the Lower Peninsula. Its boundaries are Lake Michigan on the west and north, Grand Traverse Bay on the east, and Benzie and Grand Traverse counties on the south.

The total land area of the county is 220,233.58 acres, of which about 160,000 acres are in good farms.

The population is 10,608. (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $6,388,512.

There are 61 schools, supplying positions for 84 teachers, and an enrollment of 2,385 students.

The county has 5 banks and 3 weekly newspapers, also telegraph, telephone and rural mail service.

Leland is the county seat, and has a population of about 400. It is located at the mouth of Leelanau river, the outlet of Lake Leelanau, on the west shore of the peninsula forming Leelanau county, 25 miles northwest of Traverse City, and 4½ north of Provemont, its nearest railroad point. There are Lutheran and Methodist churches, and a weekly newspaper is published. Leland has become popular as an ideal summer resort.

Empire, the largest town in the county has about 650 inhabitants. It is located on the shore of Lake Michigan and on the Manistee and Northeastern Railroad, 28 miles southwest of Leland and about the same distance from Traverse City. It has Catholic and Methodist churches, a bank and a weekly newspaper.

Other towns of the county are Northport, (pop. 600), and Suttons Bay, (pop. 600).

The transportation facilities of the county are the Empire and Southeastern, Manistee and Northeastern, Traverse City Leelanau & Manistique Railroads, and the Northern Michigan Trans. Co.

LENAWEE COUNTY.

Lenawee county was laid out in 1822 and was organized in 1826. The name is of Indian derivation from the Delaware Indian word "Leno," meaning man.

It is located in the extreme southern part of the Lower Peninsula and is bounded on the north by Jackson and Washtenaw counties, on the east by Monroe county, on the south by Ohio, and on the west by Hillsdale county.

The total land area is 466,677.51 acres, of which about 463,000 acres are devoted to farms which are wonderfully productive.

The population is 47,907. (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $58,337,881 on all taxable lands in the county.

The school system is equal in every respect to that of the other counties. There are 208 schools, 8,721 children in attendance, requiring 351 teachers.

There are 22 banks, 2 daily and 8 weekly newspapers.

Excellent telegraph, telephone and rural mail service is found in every community.

Adrian is the judicial seat of the county, also the largest city, having about 11,000 inhabitants. It is located on the south branch of the river Raisin and on the Detroit Toledo & Ironton, Lake Shore & Michigan Southern, and the Wabash Railroads, 33 miles northwest of Toledo, 58 southwest of Detroit and 83 south of Lansing. The city is noted for its beautiful shade trees and its wide pleasant avenues. It is lighted by electricity, with good police and fire departments, a fine system of water works, 5 parks, a $51,000 postoffice, a $40,000 Y. M. C. A., a $36,000 public library, a high school erected at a cost of about $100,000. Adrian college, an institution controlled by the Methodist Protestant denomination, and the State Industrial Home for Girls are located here. There are about 17 churches representing the leading denominations.

The school facilities of Adrian are among the best in the State and include several public schools and 4 parochial schools. Adrian has 5 banks, an opera house, first class hotels and 2 daily newspapers.

Adrian is one of the largest producers of wire fence in the country. In addition to this great industry there are furniture factories, basket and veneer works, a large condensed milk factory, 2 large knitting mills, flour mills, brick and tile machinery manufactory, carriage works, handle factory, planing mills, granite and marble works, foundry and machine shops, steel casting works, boiler works, bicycle and machinery works, manufactories of screen doors, steel posts, pumps, cheese, cigars, razor strops, cement blocks, gloves, etc.

Large quantities of grain, live stock, dairy produce, pork, lard, fruit, etc., are shipped. There are numerous large nurseries located near the city.

Tecumseh, another prosperous city has a population of about 3,000. It is located on the River Raisin and on the Lake Shore & Michigan Southern, the Detroit Toledo & Ironton Railways, and the Detroit Toledo and Monroe Short Line Ry., 9 miles north of Adrian, 33 from Jackson, and 59 from Detroit.

The town is beautifully laid out with wide, well paved and shaded streets, owns and operates its own electric light plant and water works, has a fine sewerage system, an efficient fire department, churches of the leading denominations, a high school and 3 ward school buildings, good hotels, an opera house, 2 banks and 2 newspapers.

Among the more prominent industries are 2 flouring mills, brick and tile machinery and clay crusher manufactory, planing mill, a foundry, wire fence factory, manufactories of building material, engines, castings, boilers, brick and tile, macaroni, carriages, wagons, etc.

Tecumseh is the trade center for one of the richest agricultural sections in the State, and an important industry is that of celery growing.

Other important towns are Addison, Blissfield, (pop. 1,550), Britton, Clayton, Clinton, (pop. 1,200), Deerfield, Hudson, (pop. 2,300), Morenci, (pop. 1,600), and Onsted, and Cement City.

The principal transportation facilities of the county include the Lake Shore and Michigan Southern, Wabash, Detroit Toledo & Ironton, and the Cincinnati Northern Railways, and the Detroit Toledo & Short line (electric).

LIVINGSTON COUNTY.

Livingston county was laid out in 1833 and was organized in 1836. It was named in honor of Edward Livingston, then Sec. of State and subsequently Minister to France.

This county is located towards the southeastern part of the Lower Peninsula. It is bounded on the north by Shiawassee and Genesee counties, on the east by Oakland county, on the south by Washtenaw county and on the west by Ingham county.

The total land area is 370,871.03 acres, of which about 350,000 acres are in farms which are among the very best in the State.

The population is 17,736 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $22,502,238 on all taxable lands in the county.

There are 137 schools, 3,413 students in attendance, requiring the services of 199 teachers.

The county has 8 banks and 7 weekly newspapers.

Good telegraph, telephone and rural mail service is found in every community.

Howell is the judicial seat, also the largest town in the county, having about 2,500 inhabitants. It is located on the Pere Marquette, and Ann Arbor Railroads, 34 miles southeast of Lansing and 54 northwest of Detroit. It is lighted by electricity, has a fine system of water works, a fire department, 7 churches, a central high and 2 ward schools, a $15,000 library, a $25,000 court house, opera house, good hotels, 2 banks, and up-to-date newspapers.

A large condensed milk factory using about 70,000 pounds of milk daily is located here. Other industries consist of wire specialty works, creamery, flour mills, planing mills, cigar factories, grain elevators, etc. This is the location of the State Sanitorium for Tuberculosis and is the second largest Holstein cattle center in America.

Fowlerville has a population of about 1,000. It is located on the Pere Marquette Railroad, 9 miles northwest of Howell and 63 from Detroit.

It has Baptist, Lutheran, Methodist Episcopal and Catholic churches, good schools, an opera house, electric lights, a city hall, 2 banks and 2 weekly newspapers.

The entire county is particularly well adapted for dairying and cattle raising and has some of the largest Holstein dairies in America. The surrounding country is also adapted to agrieulture, large quantities of wheat, corn, beans, potatoes and hay are raised.

Other towns of the county are Brighton and Pinckney.

The prineipal transportation facilities of the county are the Pere Marquette, Grand Trunk, and Ann Arbor Railroads.

LUCE COUNTY.

Luce county was laid out and organized in 1887 after being separated from Chippewa and Mackinac counties of which it was a part. It was named in honor of Cyrus G. Luce, then Governor of the State.

The total land area of the county is 582,654.15 acres. Of of this number about 21,000 acres have already been converted into farms.

This county is loeated in the northeastern part of the Upper Peninsula. Is bounded on the north by Lake Superior, on the east by Chippewa county, on the south by Mackinac county, and on the west by Alger and Sehoolcraft counties.

The population is 4,004 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $6,256,418.

The county has 17 schools, an enrollment of 962 students, requiring the services of 38 teachers.

There is 1 bank and 1 weekly newspaper, while telegraph, telephone and rural mail service add to the conveniences.

Newberry is the county seat, also the largest town, (pop. 1,300). It is located on the Duluth South Shore & Atlantie Railroad, 55 miles northwest of St Ignace, 56 southwest of Sault Ste. Maric and 96 southeast of Marquette. It has good system of water works, electric lights, churches of the Episcopal, Presbyterian, Methodist, Lutheran and Catholie denominations, a graded public school, an opera house, a bank and a weekly newspaper.

Newberry is surrounded by good agricultural lands and is rapidly developing, being settled by a prosperous farming eommunity. The Upper Peninsula Hospital for the insane is located here.

The principal transportation facility of the county is the Duluth South Shore & Atlantie Railroad.

MACKINAC COUNTY.

Mackinac county was laid out and organized in 1818. The county was first called Michilimackinac, in memory of an ancient Indian tribe who at one time occupied this territory. Later, the name was changed to that which it now bears.

This county is located in about the southeastern part of the Upper Peninsula. It is bounded on the north by Luce and Chippewa counties, on the east by Chippewa county, on the south by Lake Michigan, Straits of Mackinac, and Lake Huron, and on the west by Schoolcraft county.

The total land area is 650,255.42 acres, of which about 59,000 acres have been converted into good farms.

The population of the county is 9,249 (1910 census.)

The valuation of taxable land as estimated by the State Board of Tax Commissioners in 1911, is $8,001,963.

There are 60 schools which were attended by 1989 pupils last year requiring the services of 77 teachers.

The county has 2 banks and 2 weekly newspapers, also good telegraph, telephone and rural mail service.

St. Ignace has about 2,500 inhabitants and is the largest town and also the judicial seat of the county.

It is located on the Duluth South Shore and Atlantic Railroad, and the car ferries which run from St. Ignace to Mackinac City, connect with the Michigan Central and The Grand Rapids & Indiana Railroads.

It has fine broad streets, good cement walks, electric lights, the purest of water, a bank and 2 newspapers.

St. Ignace has won the reputation of being one of the finest and most healthful summer resorts in the Upper Peninsula, and the thousands of people who visit here annually, enjoy her natural beauty. In the woodland lakes and trout streams, hidden in the nearby forests are perch, black bass, pike, pickerel, Mackinac trout and brook trout.

A large amount of shipping passes through her waters on the way to and from Chicago, Buffalo, Detroit and Duluth.

Mackinac Island is picturesquely located on the south shore of Mackinac county, in the Straits of Mackinac, 18 miles northwest of Cheboygan, $5\frac{1}{2}$ from St. Ignace, the nearest rail approach, and 9 from Mackinaw.

The island is famous as a summer resort and is a paradise for the lover of outdoor sports, boating and fishing.

Among its historice land marks is Mackinac Island Park, ceded by the United States to the State of Michigan for the purpose of a State park. The park comprises old Fort Mackinac with 35 buildings, the military reservation of 104 acres and the old National Park of 911 acres. Fort Mackinac is the second oldest fortification now standing in the United States.

The religions are represented by churches of the Episcopal, Catholic and Union Mission denominations. There is also a public school.

Transportation facilities of the county include the Minneapolis St. Paul & Sault Ste. Marie; Duluth South Shore & Atlantic; Manistique Railroads, and the Arno'd S. S. Line; Northern Michigan Trans. Co.; Goodrich Trans. Co.; Erie and Michigan Ry. and Nav. Co.; Canadian, Atlantic Trans. Co.; Mutual Trans. Co., and the Detroit & Cleveland Nav. Co.

MACOMB COUNTY.

Macomb county was laid out and organized in 1818 and was named in honor of Alex Macomb, a General in the United States Army.

This county is located in the southeastern part of the Lower Peninsula. It is bounded on the

north by Lapeer and St. Clair counties, on the east by St. Clair county, Anchor Bay and Lake St. Clair, on the south by Lake St. Clair and Wayne county, and on the west by Oakland county.

The total land area is 300,030.20 acres, of which about 287,000 acres are in splendid farms.

The population is 32,606 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $41,803,462.

The county has 123 schools, attended by 5,808 students last year, requiring 203 teachers.

There are 17 banks, 1 daily and 11 weekly newspapers. Excellent telegraph, telephone and rural mail service is found in every community throughout the county.

Mount Clemens is the judicial seat and the largest city in the county. The population is about 9,000.

The city is located on the Grand Trunk Railway, 36 miles from Port Huron and 21 from Detroit, and on the Detroit United Railway, $2\frac{1}{2}$ miles from Lake St. Clair.

It has city water works, fire department, electric lights, a fine high school and 5 ward buildings, a fine public library, churches of the leading denominations, an opera house, 3 banks, 3 newspapers, etc.

This city is known as the "Carlsbad of America" and is visited every year by thousands of health seekers. The estimated amount now invested in the mineral wells, the hotels, boarding houses and bath houses devoted to the treatment of visitors, is about $35,000,000.

Romeo, a town of about 2,000 inhabitants, is located on the Grand Trunk Railroad, and on the Detroit United Electric Ry., 20 miles northwest of Mount Clemens and 40 from Detroit It has a municipally owned water works, and electric light plant, about 16 miles of side walks, churches of the Congregational, Baptist, Christian, Lutheran and Methodist denominations, a central school building valued at $35,000 and 2 ward schools, a new $10,000 public library, an opera house, 2 banks and a weekly newspaper. The town is surrounded by one of the best farming districts in the State.

Richmond has a population of about 1,500. It is located on the Grand Trunk, and Michigan Central Railways, about 16 miles northeast of Mount Clemens, and 38 miles northeast of Detroit. It is supported by a rich agricultural section, and has Congregational, Methodist Episcopal, Baptist, German Evangelical, Lutheran and Catholic churches, 2 schools, good hotels, an opera house, 2 banks and 2 newspapers, and a number of prosperous manufacturing establishments. The shipments comprise grain, butter, eggs, apples and live stock.

Other thriving towns of the county are Armada, Fraser, New Haven, Utica, and Warren.

The principal transportation facilities of the county include the Grand Trunk, Michigan Central, Pere Marquette Railroads, and the Detroit United Railway (electric).

MANISTEE COUNTY.

Manistee county was laid out in 1840 and was organized in 1855. The name is taken from the river which flows through it and empties into Lake Michigan within its borders. The word is of Indian origin and is supposed to mean "river with islands."

It is located in the western part of the Lower Peninsula, and is bounded on the north by Benzie county, on the east by Wexford county, on the south by Mason and Lake counties, and on the west by Lake Michigan.

The total land area of the county is 350,101.39 acres. Of this number about 145,00 acres are in farms.

The population is 26,688 (1910 census).

The valuation of taxable land as estimated by the State Board of Tax Commissioners in 1911, is $18,195,005.

The county has 76 schools, an enrollment of 5,283 students, requiring the services of 181 teachers.

There are 7 banks, 2 daily and 7 weekly newspapers.

Good telegraph, telephone and rural mail service is found in nearly every locality.

Manistee is the county seat and the largest city, having about 12,381 inhabitants (1910 census). It is beautifully located on the shore of Lake Michigan at the mouth of the Manistee river, 175 miles by water from Chicago. It is a station on the Pere Marquette, Manistee & Northeastern, and the Manistee & Grand Rapids Railroads. The city is situated in the famous Northern Michigan Fruit Belt and has a tributary territory of great productiveness. It has well paved and shaded streets, a modern electric lighting plant, a municipally owned water works, a modernly equipped fire department, 2 hospitals, a public library, an opera house, beautiful parks, first class hotels, 3 banks, 2 daily and 2 weekly newspapers, also a good school system. There are churches of the Congregational, Baptist, Episcopal, German Lutheran, Methodist, Unitarian and Catholic denominations. This city is well known as a summer resort.

The more important industrial interest include saw, shingle and planing mills, salt blocks, a modernly equipped dry dock and shipyard, iron works, brewery, tower clock factory, cooperage machinery works, emery wheel works, furniture factories, saw and tool works, shoe factory, lumber and mill carts, carriages, wagons and sleighs, flour mills, brick and tile works, novelty works, broom factory, boiler and engine works, cigar factories, glove, candy and shirt factories, etc.

Other towns of the county are Bear Lake, Copemish, and Onekama.

Transportation facilities of the county are the Manistee & Northeastern, Arcadia & Betsey River, Pere Marquette, Ann Arbor, Manistee & Luther, and the Manistee and Grand Rapids Railroads, the Northern Michigan Trans. Co., and the Pere Marquette line of steamers.

MARQUETTE COUNTY.

Marquette county was laid out in 1843 and was organized in 1851 and was named in honor of Father Jaques Marquette, who established several missions among the Indians.

It is located in the northern part of the Upper Peninsula, is bounded on the north by Lake Superior, east by Alger and Delta counties, South by Dickinson, Menominee and Delta counties, and west by Iron and Baraga counties.

The total land area is 1,182,851.15 acres. Of this number, about 68,000 acres are in farms.

The total population is 46,739 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $74,089,264 on all taxable lands.

The county has 92 schools, furnishing positions for 342 teachers, and a total enrollment of 10,253 students.

There are 10 banks, 2 daily and 6 weekly newspapers. There is also good telegraph, telephone and rural mail service.

Marquette is the county seat and has about 12,000 inhabitants. It is picturesquely located on the south shore of Lake Superior on an inlet known as Marquette Bay, 170 miles west of Sault Ste. Marie. It is the metropolis of the mining interests of the Lake Superior iron region. The first iron dock was built in 1845.

This city is the general headquarters of the Duluth South Shore & Atlantic Railroad, also the home office of the Lake Superior and Ishpeming Ry. It has wide and well laid out streets, a complete sewerage system, thoroughly equipped fire department, good water works, police department, municipal light and power plant, a public library, a normal school library, an opera house, a $250,000 court house, first class hotels, 3 hospitals, a $50,000 city hall. This is also the location of the Upper Peninsula State Prison and House of Correction. The school property includes 10 buildings, the high school, which includes the Manual Training School, costing about $100,000. There are churches of the leading denominations, also 3 banks, 1 weekly and 2 daily newspapers.

The manufacturing interests comprise iron works, foundry and machine shops, saw and planing mills, brewery, powder plant, charcoal works, carriage and wagon works, boiler and sheet iron works, gas light plant, etc. There is also a large stone quarry within the city limits.

Ishpeming, the largest city in the county has a population of about 12,448 (1910 census). It is located on the Duluth South Shore & Atlantic, Chicago & Northwestern, and the Lake Superior & Ishpeming Railroads, 15 miles southwest of Marquette, and 3 west of Negaunee.

It is the largest city and one of the most important mining centers in the Lake Superior iron district, having located within its corporate limits 8 iron mines; there is also a smelting furnace, a boiler shop, carriage and wagon factories, etc. There are churches of the leading denominations, good public and parochial schools, an opera house, a public library. The city is lighted by gas and electricity, has a good water works system, efficient fire department, 2 banks, 4 weekly newspapers, etc.

Negaunee has a population of about 8,460 (U. S. census 1910). It is located on the Duluth South Shore & Atlantic, Chicago & Northwestern, and the Lake Superior & Ishpeming railways, in the heart of the iron district, 12 miles southwest of Marquette and 3 from Ishpeming.

The city is lighted by electricity, has water works, a well equipped fire department, Episcopal, Methodist, Presbyterian, Catholic, Swedish and Finnish Lutheran churches, 6 school buildings, an opera house, a library, 3 banks and a weekly newspaper.

The principal transportation facilities of the county are the Chicago Milwaukee & St. Paul, Escanaba & Lake Superior, Chicago & Northwestern, Munising Marquette & Southeastern, Lake Superior & Ishpeming, and the Duluth South Shore & Atlantic railroads, and the Erie & Western Trans. Co., and the Northern S. S. Co.

MASON COUNTY.

This county was originally laid out in 1840 and was named Notipekago, the Indian name of Pere Marquette river. Later, in 1843 the name was changed and the present name given in honor of Stevens T. Mason, the first Governor of the State. The county was organized in 1855.

It is located in the extreme west central part of the Lower Peninsula, is bounded on the north by Manistee county, on the east by Lake county, on the south by Oceana county, and on the west by Lake Michigan.

The total land area is 315,526.87 acres, of which about 172,000 acres are in fine farms.

The population is 21,832 (1910 census).

The valuation of taxable land as estimated by the State Board of Tax Commissioners in 1911, is $13,791,430.

The county has a school system equal to those of the larger counties, there being 78 schools, attended by 4,834 students, requiring the services of 153 teachers.

There are 8 banks, 1 daily and 5 weekly newspapers.

Good telegraph, telephone and rural mail service is found in nearly all localities.

Ludington is the judicial seat, also the largest city in the county, having about 9,132 inhabitants. It is situated about half way up the east shore of Lake Michigan at the mouth of the Pere Marquette river, 98 miles from Milwaukee and 156 from Chicago. It is the western terminus of the Pere Marquette Railroad, and is in the heart of the Michigan fruit belt.

The city has paved streets, good sewerage system, excellent schools, a fine public library, an efficient fire department, electric light and power plant, an opera house, first class hotels, domestic gas for fuel and light, a municipally owned water works system, churches of the Congregational, Episcopal, Danish Episcopal, German Lutheran, Methodist, Baptist, Norwegian Baptist, Presbyterian, Swedish Lutheran and Catholic denominations, 2 banks, 3 newspapers, etc.

Among the more prominent industrial establishments are saw and shingle mills, several big salt factories, including one of the largest salt producing plants in the world, one of the largest manufactories of game boards in the world, watch case factory, foundry, machine shops, boiler works, planing and feed mill, a cannery, boat and engine works, cigar factories, manufactories of wood type and printers' specialities, vehicle specialties, woodenware, enameled wood goods, baskets, sash, doors and blinds, snuff, wooden bowls, a grain elevator, etc.

Ludington is famous for its summer resort facilities.

Other towns of the county are Scottville, (pop. 1,400), and Custer, (pop. 325).

Scottville is located on the Pere Marquette Railroad and on the Pere Marquette river, 9 miles east of Ludington, and 40 west of Reed City. It is supported by a rich farming district, and has churches of several denominations, a graded public school, water works, an opera house, flour mill, grain elevator, butter factory, 2 banks and a weekly newspaper. Quantities of grain, butter, fruit, flour, potatoes and produce are shipped.

The transportation facilities of the county include the Manistee & Grand Rapids, Ludington & Northern, and the Pere Marquette Railroads, the Pere Marquette S. S. Line, the Northern Michigan Trans. Co.

MECOSTA COUNTY.

Mecosta county was laid out in 1840 and was organized in 1859. The name is that of a once famous Pottawatomie chief and is thought to mean "bear cub."

This county is located in about the west central part of the Lower Peninsula and is bounded on the north by Osceola county, on the east by Isabella county, on the south by Montcalm county, and on the west by Newaygo county.

The total land area comprises 362,778.58 acres. Of this number, about 286,000 acres are devoted to good farms.

The population is 19,466 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $10,936,441 on all taxable lands.

There are 113 schools, which were attended by 4,383 pupils last year, requiring the services of 162 teachers.

The county has 6 banks, 2 daily and 5 weekly newspapers.

Telephone, telegraph and rural mail service is found throughout the county.

Big Rapids, the judicial seat and largest city of the county has a population of about 5,000. It is located on the Grand Rapids & Indiana, and the Pere Marquette Railroads, 56 miles north of Grand Rapids.

The city is named after the big rapids of the Muskegon river, which flows through it and furnishes unexcelled water power. It is lighted by electricity, has a good water works system, fire and police departments, excellent sewerage system, a public library, an opera house, a court house costing about $30,000, good hotels, paved streets, 2 banks and 3 newspapers. The religious and educational advantages include Congregational, Episcopal, Methodist, Baptist, Presbyterian, Catholic, Norwegian Lutheran, German Lutheran and Swedish Lutheran churches, a central high and 3 ward schools, and the Ferris institute which is known throughout the country.

Among the city's prominent industries are planing and saw mills, maple floor factories, gas light and fuel plant, electric light and power plant, machine shop, and manufactories of furniture, cigars, brooms, flour, spring seats, hot blast grates, saw filing machinery, carriages, veneer, brick, etc.

Other thriving communities of the county are Barryton, Mecosta, Morley, and Stanwood.

The principal transportation facilities of the county are the Grand Rapids & Indiana, and the Pere Marquette Railroads.

MENOMINEE COUNTY.

Menominee county was laid out by the Legislature in 1861 as Bleeker county, but the following session, in 1863, it was organized and the name changed to that which it now bears. The word Menominee is derived from the Chippewas and means "good grain."

It is located in the extreme south central part of the Upper Peninsula. Is bounded on the north by Dickinson, Marquette and Delta counties, on the east by Delta county and Green Bay, on the south by Green Bay and Wisconsin, and on the west by Wisconsin and Dickinson counties.

The total land area is 670,297.43 acres. Of this number, about 168,000 acres are devoted to fine productive farms.

The population is 25,648 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $19,673,938.

There are 101 schools, attended by 6,445 students, requiring 195 teachers.

The county has 6 banks, 1 daily and 2 weekly newspapers, also good telegraph, telephone and rural mail service.

Menominee, the county seat and largest city, has about 12,000 inhabitants. It is prettily located at the mouth of Menominee river, on the shore of Green Bay, on the Chicago Northwestern, Chicago Milwaukee & St. Paul, and the Wisconsin & Michigan Railroads, 264 miles from Chicago and 137 from Marquette.

The city is lighted by electricity and gas, has good water works system, paved streets, splendid sewerage system, a well equipped fire department, a public library, first class hotels, a postoffice completed at a cost of about $50,000, an opera house, 3 banks, 1 newspaper, etc.

The manufacturing industries include an immense beet sugar plant, one of the largest manufactories of children's vehicles in the U. S., the second largest saw mill machinery manufactory and steel casting plant in the country, an electric manufacturing plant, one of the largest and best equipped canning plants in the world, also several smaller industries.

There are churches of the Episcopal, Methodist, Presbyterian, Baptist, German Methodist, Lutheran, Norwegian Lutheran, Catholic, Seventh Day Adventist, Swedish Lutheran and Swedish Methodist denominations. There are nine public schools, a high school building costing $65,000. The Menominee County School of Agriculture and Domestic Science is located here. The surrounding country is a productive agricultural section.

Other towns of the county are Daggett, and Stephenson.

The principal transportation facilities of the county are the Chicago & Northwestern, Wisconsin & Michigan, Minneapolis St. Paul & Sault Ste. Marie, and the Chicago Milwaukee & St. Paul Railroads.

MIDLAND COUNTY.

Midland county was laid out in 1831 and was organized in 1850. The name is descriptive of the geographical location of this county as it is very nearly in the center of the Lower Peninsula.

It is bounded on the north by Gladwin county on the east by Bay and Saginaw counties, on the south by Gratiot and Saginaw counties, and on the west by Isabella county.

The total land area is 336,476.23 acres, of which about 177,000 acres are in farms which are very productive.

The population is 14,005 (U. S. census 1910).

The valuation of all taxable lands as estimated by the State Board of Tax Commissioners in 1911, is $9,239,473.

There are 87 schools, supplying positions for 125 teachers, and 3,812 children in attendance.

The county has 4 banks and 3 weekly newspapers.

Telegraph, telephone and rural mail service is found in nearly every locality.

Midland, the county seat and largest town of the county, has about 3,000 inhabitants. It is located at the confluence of the Tittabawassee and Chippewa rivers, and on the Pere Marquette and Michigan Central Railroads, about 20 miles northwest of Saginaw and 18 west of Bay City. It is well laid out with broad and well shaded streets, has churches of the Episcopal, Presbyterian, Methodist, Baptist, German Lutheran and Catholic denominations; 6 good schools, a free library, an opera house, has good sewerage and water works, good hotels, 2 banks and 2 weekly newspapers.

The manufacturing industries consist of flour, lumber, shingle, lath, cider and heading mills, pickle depots, brick and tile works, cigar factories, electric lighting plant, chemical works, a bleaching powder

factory, foundry, machine shops, etc. The surrounding country produces excellent crops of wheat, oats, hay, beans, sugar beets, etc.

Coleman has a population of about 1,100. It is located on the Pere Marquette Ry., 20 miles northwest of Midland, and 40 from Saginaw.

Has Episcopal, Presbyterian, Methodist, Latter Day Saints, and Catholic churches, good educational advantages, an electric lighting plant, a bank and a weekly newspaper.

The county's transportation facilities include the Michigan Central, and Pere Marquette Railroads.

MISSAUKEE COUNTY.

Missaukee county was laid out in 1840 and was organized in 1871. It was named for a famous Ottawa Chief and the name is thought to mean "at large mouth of river."

The county is located in about the north central part of the Lower Peninsula. Is bounded on the north by Kalkaska county, on the east by Roscommon county, on the south by Osceola and Clare counties, and on the west by Wexford county.

The total land area is 363,289.57 acres, of which about 148,000 acres are now devoted to farms.

The population is 10,606 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $5,575,611.

There are 68 schools, which were attended by 2,707 students last year, requiring 102 teachers.

The county has 4 banks and 3 weekly newspapers. Also telegraph, telephone and rural mail service.

Lake City is the largest town, also the county seat, and has a population of about 800. It is situated on the Grand Rapids & Indiana Ry., 16 miles from Cadillac and 113 from Grand Rapids. It is the receiving and distributing point for a tributary section having good agricultural possibilities. Has electric light and water works plant, churches of the Methodist, Episcopal, Free Methodist, Presbyterian and Catholic denominations, a good school system, an opera house, flour and saw mills, 2 banks and 2 weekly newspapers.

McBain has a population of about 750. It is located on the Ann Arbor Ry., 10 miles south of Lake City.

It has Methodist and Presbyterian churches, a bank and a weekly newspaper.

The principal transportation facilities of the county are the Ann Arbor, Grand Rapids & Indiana, and the Pere Marquette Railroads.

MONROE COUNTY.

Monroe county was laid out in 1817 and was organized in 1822, and was named in honor of President Monroe.

This county is located in the extreme southeastern part of the Lower Peninsula. It is bounded on the north by Washtenaw and Wayne counties, on the east by Lake Erie, on the south by Ohio and on the west by Lenawee county.

The total land area is 355,292.52 acres, about 333,000 acres of which are in splendid farms.

The population is 32,917 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $33,963,252.

There are 145 schools, furnishing positions for 199 teachers, and an enrollment of 6,237 students.

The county has 13 banks and 10 weekly newspapers, also good telegraph, telephone and rural mail service.

Monroe, the second oldest city in the State and the judicial seat of Monroe county has a population of about 7,500. It is situated on the River Raisin, about 3 miles above its mouth on Lake Erie,

and is a station on the Lake Shore & Michigan Southern, Michigan Central, and Pere Marquette Railroads, 35 miles southwest of Detroit and 25 from Toledo, Ohio.

The Detroit United Railway (electric) connects Detroit, Toledo and Monroe.

The city is lighted by electricity, has good water works system, a well equipped fire department, good sewerage system, churches of the leading denominations, a fine high school building and several ward schools. There is also a Catholic orphan asylum for girls, a convent, the St. Mary's Academy, and St. Mary's College, a handsome public library, a court house costing about $40,000, 3 newspapers, etc.

The manufactures include flour, lumber, sash, doors and blinds, furniture frames, glass, paper boxes, cordage, beer, wine, pumps, cigars, butter, cheese, agricultural implements, paper, carriages, wagons, etc. Within the past few years the beef industry has developed wonderfully, the people of the county giving special attention to rearing fine beef cattle, also the well known Percheron horses.

The land in the neighborhood is fertile, and grain, grass, fruit, grapes and berries are grown in large quantities. Monroe is also noted for its extensive nurseries.

Dundee has a population of about 1,100, and is located on the River Raisin, and on the Ann Arbor, Detroit Toledo & Ironton, and the Lake Shore and Michigan Southern Railways, 15 miles west of Monroe, 22 northwest of Toledo, O., and 48 southwest of Detroit.

The town is lighted by electricity, has Congregational, Baptist, German Lutheran and Methodist churches, good educational advantages, 2 banks and a weekly newspaper.

Other towns are Maybee, and Petersburg.

The principal transportation facilities of the county are the Detroit & Toledo Shore Line, Michigan Central, Lake Shore & Michigan Southern, Pere Marquette, Detroit Toledo & Ironton, Ann Arbor, Wabash, and the Toledo Ann Arbor & Jackson Railways.

MONTCALM COUNTY.

Montcalm county was laid out in 1831 and was organized in 1850, and was named in honor of Marquis De Montcalm.

It is located in about the west central part of the Lower Peninsula and is bounded on the north by Mecosta and Isabella counties, on the east by Gratiot County, on the south by Ionia and Kent counties, and on the west by Newaygo and Kent counties.

The total land area is 454,460.77 acres, about 393,000 acres of which are in splendid farms.

The population is 32,069 (U. S. census 1910).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $20,829,816.

There are 143 schools, with an enrollment of 6,879 students, requiring the services of 239 teachers.

The county has 18 banks, 1 daily and 11 weekly newspapers, also telegraph, telephone and rural mail service.

Stanton, the county seat, has a population of about 1,200. It is located on the Pere Marquette R. R., 24 miles north of Ionia, and 61 northwest of Lansing.

It is lighted by electricity, has water works, churches of the Congregational, Methodist, Free Methodist, Baptist and Catholic denominations, a union school building, 2 opera houses, a new court house costing about $80,000, a bank and 2 weekly newspapers. The soil in the vicinity is especially adapted for farming.

Greenville with its 4,200 inhabitants, is the largest city in the county.

It is located on the Flat River, and on the Grand Trunk and Pere Marquette Railroads, 15 miles southeast of Stanton, and 41 northeast of Grand Rapids.

It is lighted by electricity and gas, has water works, fire department, Episcopal, Congregational, Adventist, Baptist, Catholic, Danish Lutheran, and Methodist churches, excellent schools, a ladies' library, 2 public halls, good hotels, 3 banks, a daily and weekly newspaper.

The manufacturing interests include 3 flour mills, 2 of the largest refrigerator factories in America, sideboard factory, agricultural implement factories, blast furnace, grain and potato planter factories, planing and saw mills, cider mill, sash and door factories, 2 electric light and power plants, a potato starch factory, etc.

Greenville is known as one of the most important potato markets in the State.

Other important towns include Howard City (pop. 1,100), Carson City (pop. 1,000), Edmore (pop. 800), Lakeview (pop. 1,000), McBrides and Sheridan, all surrounded by good farming country.

The transportation facilities of the county are the Grand Rapids & Indiana, Pere Marquette and Grand Trunk Railroads.

MONTMORENCY COUNTY.

In 1840, this county was laid out and was then named Checonoquet, for a Chippewa chief. The name is supposed to mean "Big Cloud." In 1843 the county was organized and the present name given it. It is uncertain what the name Montmorency commemorates.

This county is located in the northern part of the Lower Peninsula. Is bounded on the north by Cheboygan and Presque Isle counties, on the east by Alpena county, on the south by Oscoda county, and on the west by Otsego county.

The total land area is 355,528.77 acres, and about 56,000 acres are already devoted to farms.

The population is 3,755 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $2,022,828 on all taxable land.

The county has 32 schools, furnishing positions for 37 teachers, and an enrollment of 743 students.

There are 3 banks and 3 weekly newspapers.

Telephone, telegraph and rural mail service is also to be found.

Atlanta is the county seat and has about 200 inhabitants. It is located 14 miles from Lewiston which is on the Michigan Central Railroad, and is the shipping point, and 39 west of Alpena. Has a Congregational church, a bank and a weekly newspaper.

Hillman has a population of about 500, and is located on Thunder Bay river, and on the Detroit & Mackinac Railroad, 16 miles northeast of Atlanta, and 24 from Alpena. Has Episcopal, Presbyterian, Methodist Episcopal and Catholic Churches, a bank and a weekly newspaper.

The principal transportation facilities of the county are the Michigan Central, Detroit & Mackinac, and the Boyne City Gaylord & Alpena Railroads.

MUSKEGON COUNTY.

Muskegon county was laid out and organized in 1859. It took its name from the river running through it and emptying into Lake Michigan. The word is taken from the Pottowattomie language and is thought to mean "Marshy River.'

It is located in the extreme west central part of the Lower Peninsula, and is bounded on the north by Oceana and Newaygo counties, on the east by Newaygo and Kent counties, on the south by Ottawa county and on the west by Lake Michigan.

The total land area is 322,434.68 acres, of which about 185,000 acres are in fine farms.

The population is 40,577 (1910 census).

The valuation of taxable land as estimated by the State Board of Tax Commissioners in 1911, is $29,183,320.

There are 116 schools, attended by 8,437 students, requiring the services of 311 teachers.

The county has 10 banks, 2 daily and 4 weekly newspapers, also telegraph, telephone and rural mail service.

Muskegon is the judicial seat, also the largest city in the county, having over 30,000 inhabitants. It is located on the east shore of Lake Michigan, and on the Pere Marquette, Grand Rapids & Indiana

and the Grand Trunk Railroads, and the Grand Rapids Grand Haven & Muskegon Ry. (electric). It is one of the best harbors on the east shore of Lake Michigan and is located directly across the lake from Milwaukee, being 84 miles distant from that city and 113 from Chicago, to which cities, boat service is maintained all the year round. At this point the Muskegon river broadens out into a beautiful lake 6 miles long and from 1 to 3 miles wide, which empties into Lake Michigan through a channel 300 feet wide and of sufficient depth to admit into the harbor the largest and heaviest vessels that ply the lakes.

The city has an area of 6 square miles, 35 miles of pavement 40 miles of public sewers, 5 public parks, covering 85 acres, a thoroughly equipped fire department, municipally owned water works, 21 public school buildings, one of the best equipped free manual training schools in the United States, many churches of different denominations, first class hotels, theatres, a beautiful public library costing $230,000, 2 hospitals, 4 banks, 2 daily and 1 weekly newspaper, etc.

The city is in the great Michigan fruit belt and in the vicinity are some of the finest and most productive sections devoted to raising the small fruits, grapes, peaches, plums and apples. The rich lands of the Muskegon river bottom are especially adapted to the cultivation of celery, which promises to become a most important industry.

Among the more prominent industries are iron foundries and machine shops, a refrigerator works, billiard and pool table factory and a curtain roller factory which are among the largest in the world, automobile works, marine motor works, paper mill, furniture factories, brewery, electric cranes, etc.

The city of Muskegon Heights which adjoins the city limits, has a population of about 3,000.

Whitehall has a population of about 1,800. It is located at the head of White Lake and on the Pere Marquette Railroad, 16 miles north of Muskegon, and 5 inland from Lake Michigan, and Montague, with about 1,200 inhabitants, located at the head of White Lake, opposite Whitehall, on the Pere Marquette Railroad, 19 miles from Muskegon and about 6 from Lake Michigan, are other thriving towns of Muskegon County.

The principal transportation facilities of the county are the Pere Marquette, Grand Trunk, Grand Rapids & Indiana, and the Grand Rapids Grand Haven & Muskegon Railroads, and the Goodrich Crosby Trans. Co's Boat Lines.

NEWAYGO COUNTY.

Newaygo county was laid out in 1840 and organized in 1851, the name being that of a famous Chippewa Chief.

It is located in the west central part of the Lower Peninsula, and is bounded on the north by Lake county, on the east by Mecosta and Montcalm counties, on the south by Muskegon and Kent counties, and on the west by Oceana and Muskegon counties.

The total land area is 542,741.03 acres. Of this number about 326,000 acres are devoted to farms which are very productive.

The population is 19,220 (federal census 1910).

The valuation of taxable land as estimated by the State Board of Tax Commissioners in 1911, is $13,884,995.

There are 127 schools, furnishing positions for 185 teachers, and an enrollment of 4,706 students.

The county has 7 banks, 5 weekly newspapers, also telephone, telegraph and rural mail service.

White Cloud, which is the county seat, has a population of about 700. It is located on the White river, and on the Pere Marquette Railroad, 35 miles northeast of Muskegon and 45 north of Grand Rapids. It owns and operates its own electric light and water works plant, has a fire department, public hall, excellent schools, churches of the Congregational, Methodist, Swedish Evangelical and Catholic denominations, 2 banks and 2 weekly newspapers.

Fremont, the largest town of the county has about 2,000 inhabitants. It is located on the Pere Marquette Railroad 12 miles northeast of Newaygo, 24 northeast of Muskegon, and 58 north of Grand

Rapids. Has Congregational, Methodist, United Brethren, Holland, Disciples, and Catholic churches, public hall, water works, good schools, flour mills, saw mill, tannery, canning factory, pickle factory, electric lighting plant, 2 banks, a weekly newspaper, etc.

Other towns of the county include Grant, (pop. 500), and Newaygo, (pop. 1,300).

Principal transportation facility of the county is the Pere Marquette Railroad.

OAKLAND COUNTY.

Oakland county was laid out in 1819 and organized in 1820. The county was so named because of the numerous oak openings. Bela Hubbard in his "Memorials of a Half Century" speaks of the character of the "openings" as that of "a majestic orchard of oaks and hickories varied by small prairies, grassy loams and clear lakes."

It is located in the southeastern part of the Lower Peninsula, and is bounded on the north by Genesee and Lapeer counties, on the east by Macomb county, on the south by Washtenaw and Wayne counties, and on the west by Livingston and Genesee counties.

The total land area is 575,400.15 acres, of which about 543,000 acres are in farms which are among the finest in the State.

The population is 49,576 (U. S. census 1910).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $55,543,810.

The county has a splendid school system. There are 213 schools, an enrollment of 9,407 students students last year, requiring 379 teachers.

There are 22 banks, 1 daily and 1 monthly and eleven weekly newspapers. Good telegraph, telephone and rural mail service is found in every locality.

Pontiac, the largest city, also the judicial seat of the county has about 16,000 inhabitants. It is located on the Clinton river, on the Detroit United Railway (electric), the Grand Trunk, and the Pontiac Oxford & Northern Railroads, 26 miles northwest of Detroit and 57 miles southwest of Port Huron.

The city is beautifully located in the heart of Michigan's inland lake district, has broad and well shaded streets, is lighted by electricity, has water works, an efficient fire department, sewerage system, churches of the leading denominations, 8 graded schools and a $70,000 high school building, a public library, theatres, first class hotels, a public hospital, a court house costing $120,000, a handsome city hall, 4 banks, a daily and weekly newspaper, and is the location of the Pontiac State Hospital.

The larger manufacturing industries included a wire fence factory, spring factory, planing mills, bending works, and manufactories of auto tops, autos, motor trucks, knit goods, paint, leather goods, bean pickers and seeders, woodwork wheels, oak flooring, vinegar, flour, tools, machinery, etc.

Rochester has a population of about 2,000. It is located at the confluence of the Clinton river and Paint creek, on the Michigan Air Line division Grand Trunk Railway, the Bay City division Michigan Central Railroad, and on the Flint division of the Detroit United Railway (electric), 9 miles northeast of Pontiac, and 27 from Detroit.

It has Congregational, Methodist, Baptist and Universalist churches, a graded public school, a ladies' library, an opera house, good hotels, 2 banks and 2 weekly newspapers.

The industries include paper and saw mills, tile roofing factory, handle factory, woolen mills, foundry, electric light works, etc.

Other enterprising towns of the county include Birmingham, Clarkston, Farmington, Holly, Leonard, Milford, Orion, Ortonville, Oxford, Royal Oak, and South Lyon.

The principal transportation facilities of the county are the Michigan Central, Grand Trunk, Pere Marquette, and the Pontiac Oxford & Northern Railroads, and the Detroit United Ry. (electric.)

OCEANA COUNTY.

Oceana county was laid out in 1831, and was organized in 1855. It is so named because of its bodering upon the large fresh water sea or ocean.

It is located in the extreme west central part of the Lower Peninsula. The boundaries are Mason county on the north, Newaygo county on the east, Muskegon county on the south, and Lake Michigan on the west.

The total land area is 345,416.25 acres. Of this number, about 244,000 acres are devoted to fine farms.

The population is 18,379 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $11,853,671 on all taxable land.

There are 95 schools, furnishing positions for 156 teachers, and a total of 4,314 pupils in attendance.

The county has 8 banks, 7 weekly newspapers, also splendid telegraph, telephone and rural mail service.

Hart, the judicial seat and largest town in the county has a population of about 1,600. It is located on the Pere Marquette Railroad, and on the south branch of the Pentwater river, 8 miles south of Pentwater, and 42 north of Muskegon.

It is lighted by electricity, has water works, fire department, a high school building erected at a cost of about $50,000, churches of several denominations, 2 banks and 3 weekly newspapers.

The industries include saw, flour, planing and shingle mills, canning factories, etc. The shipments comprise peaches, plums, small fruits, potatoes, lumber, flour, wheat, canned goods and wool.

Pentwater has a population of about 1,400. This town is located on the shore of Lake Michigan at the outlet of Pentwater lake, and on the Pere Marquette Railroad, 8 miles northwest of Hart, and 44 north of Muskegon.

It is lighted by electricity, has Baptist, Episcopal, Methodist, Church of Christ, and Catholic churches, excellent educational advantages, a public library, an opera house, a fire department, water works, a fruit canning factory, 2 banks and a weekly newspaper.

The shipments consist of lumber, lath, shingles, tanbark, fish and large quantities of apples, peaches, potatoes and produce.

Other towns of the county are Hesperia, Shelby and Walkerville.

The principal transportation facilities of the county are the Pere Marquette Railroad, The Northern Michigan Trans. Co. and the Hill Boat Line.

OGEMAW COUNTY.

Ogemaw county was laid out and organized in 1840. The name is taken from the Chippewas' and the meaning of which is "Chief."

This county is located in about the north-eastern part of the Lower Peninsula. It is bounded on the north by Oscoda county, on the east by Iosco county, on the south by Gladwin and Arenac counties, and on the west by Roscommon county.

The total land area is 366,811.14 acres, about 145,000 acres of which are already in good farms.

The population is 8,907 (census 1910).

The valuation of taxable land as estimated by the State Board of Tax Commissioners in 1911, is $4,817,885.

The school system is equal to that of most of the larger counties. There are 59 schools, 2,342 students in attendance, requiring the services of 82 teachers.

The county has 5 banks and 4 weekly newspapers. Also good telegraph, telephone and rural mail service.

West Branch is the judicial seat and largest town of the county. The population is about 1,800. It is located on the Mackinaw division Michigan Central Railroad, 53 miles northwest of Bay

City and 162 northwest of Detroit. It is lighted by electricity, has well shaded and paved streets, a handsome court house, good water and drainage system, opera house, fire department, a public library, Episcopal, Methodist and Catholic churches, 2 banks and 2 live newspapers.

The industrial enterprises include saw and planing mills, machine shop, flour mill, electric lighting plant, creamery, etc. Large quantities of live stock, clover seed and huckleberries are shipped.

Rose City has about 550 inhabitants, and is located on a branch of Rifle river, and on the Detroit and Mackinac Railroad, 15 miles northeast of West Branch.

It has Free Methodist, Lutheran and Methodist Episcopal churches, a bank and a weekly newspaper.

The transportation facilities of the county are the Michigan Central, and Detroit & Mackinac Railroads.

ONTONAGON COUNTY.

Ontonagon county was laid out in 1843, was organized in 1848. The county was originally much larger and included that territory known as Isle Royal. It took its name from the river of the same name, emptying into Lake Superior. The word "Ontonagon" is thought to mean "fishing place."

It is located in the extreme northwestern part of the Upper Peninsula. Is bounded on the north by Lake Superior, on the east by Houghton and Iron counties, on the south by Gogebic county, and on the west by Gogebic county and Lake Superior.

The total land area is 844,753.71 acres. About 39,000 acres are already in good farms.

The population is 8,650 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $15,597,875.

The county has a good school system. There are 55 schools, an enrollment of 2,484 students, requiring 99 teachers.

There are 6 banks and 2 weekly newspapers. There is also good telephone and telegraph service.

Ontonagon is the county seat and has about 2,000 inhabitants.

It is situated on the south shore of Lake Superior at the mouth of the Ontonagon river, and is a station on the Chicago Milwaukee & St. Paul railway.

It owns and operates its own water and electric light plants, has Episcopal, Presbyterian, Methodist Episcopal, Swedish Lutheran and Roman Catholic churches, fine schools, 2 banks, a weekly newspaper, etc. This locality is fast becoming known as a healthful summer resort.

In the vicinity of Ontonagon are several billion feet of hemlock, pine, ash, basswood, birch, maple, elm, cedar, and other timber of the finest quality, making it a fine location for saw mills, furniture factories, stave and heading mills, tanneries, pulp and paper mills, woodenware plants, chemical plants, etc. Clays and shales for the manufacture of paving brick and fine face brick are found in abundance.

The agricultural possibilities of this locality are good and fine farms are numerous. The soil is adapted to the growing of many kinds of grains, vegetables and fruits.

The principal transportation facilities of the county are the Duluth South Shore & Atlantic, Chicago & Northwestern, Chicago Milwaukee & St. Paul, and the Copper Range Railroad, also the United States & Dominion Trans. Co.

OSCEOLA COUNTY.

Osceola county was laid out in 1840 and was originally called "Unwattin," the name of a famous Ottawa chief. Later, in 1843 the name was changed to Osceola which is said to mean "black drink." The county was finally organized in 1869.

This county is located in about the northwestern part of the Lower Peninsula. It is bounded on the north by Wexford and Missaukee counties, on the east by Clare county, on the south by Mecosta county, and on the west by Lake county.

The total land area is 367,337.05 acres, and about 249,000 acres are already in good productive farms.

The population is 17,889 (1910 census).

The valuation of all taxable property as estimated by the State Board of Tax Commissioners in 1911, is $10,397,176.

The school system in this county is good. There are 98 schools, furnishing positions for 150 teachers, and a total enrollment of 4,127 students.

The county has 9 banks and 7 weekly newspapers. Also telegraph, telephone and rural mail service.

Hersey is the judicial seat of the county. The village has about 350 inhabitants, and is located at the confluence of the Hersey and Muskegon rivers, on the Pere Marquette, and Grand Rapids and Indiana Railroads. It has churches of the Congregational, German Evangelical and Methodist Episcopal denominations, an electric light and power plant, a bank and a weekly newspaper.

Reed City, the largest town of the county has a population of about 2,000. This town is located on the Hersey river at the intersection of the Pere Marquette and Grand Rapids and Indiana Railroads, 4 miles west of Hersey, 48 east of Ludington, and 68 north of Grand Rapids. It is also in a good agricultural section.

It is lighted by electricity, has a good water works system, good hotels, an opera house, grain elevator, excellent educational advantages, a library, churches of the Congregational, Baptist, Lutheran, German Lutheran, Mennonite, Swedish, German Methodist, Methodist and Catholic denominations, 2 banks and 2 weekly newspapers.

There are manufactories of shingles, maple flooring, saw, planing, heading, flour and woolen mills, foundry, etc.

Other towns of the county include Evart, (pop. about 1,400), Le Roy, Marion, and Tustin.

Evart is situated on the Pere Marquette railroad, between Saginaw and Ludington. It has good hotels, an opera house, good school system, Baptist, Catholic, Methodist and Presbyterian churches 2 libraries, electric light and water works plant, fire department, 2 banks and a weekly newspaper. The shipments include lumberman's tools, lumber, farm produce and grain.

The transportation facilities of the county include the Grand Rapids & Indiana, Pere Marquette, Manistee & Grand Rapids, and the Ann Arbor Railroads.

OSCODA COUNTY.

Oscoda county was laid out and organized in 1840. The name is of Indian origin and is said to mean "pebbly prairie."

It is located in the northeastern part of the Lower Peninsula and is bounded on the north by Montmorency county, on the east by Alcona county, on the south by Ogemaw county, and on the west by Crawford county.

The total land area is 364,769.48 acres. Of this number about 60,000 acres are now devoted to farms. The population is 2,027.

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $2,264,747.

There are 29 schools, 521 students in attendance, requiring the services of 33 teachers.

The county has 2 banks, 1 weekly newspaper, telegraph, telephone and rural mail service.

Mio, the county seat has a population of about 300. It is situated on the Au Sable river, 15 miles from Comins, its shipping point.

It has a Methodist church, a bank and a weekly newspaper.

The transportation facility of the county is the Au Sable and Northwestern Railroad.

OTSEGO COUNTY.

This county was first laid out in 1840, and was at that time called "Okkuddo." In 1843 the name was changed to Otsego which is said to mean "clear water." The county was organized in 1875.

It is located in the northern part of the Lower Peninsula. The boundaries are Cheboygan county on the north, Montmorency county on the east, Crawford county on the south and Antrim and Charlevoix counties on the west.

The total land area is 334,272.96 acres. Of this number about 60,000 acres are already in good farms.

The population is 6,552 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $6,914,039.

A good school system is to be found throughout the county. There are 40 schools, an enrollment of 1,642 students, furnishing positions for 72 teachers.

The county has five banks and two weekly newspapers, while good telegraph, telephone and rural mail service is also to be found.

Gaylord, the judicial seat of the county, has about 1,800 inhabitants. It is located on the Michigan Central, and the Boyne City Gaylord and Alpena Railroads, 63 miles south of Mackinaw City.

It is the trading point for a prosperous agricultural section, has Congregational, Methodist, Baptist and Catholic churches, a high school building erected at a cost of about $27,000, municipally owned water works and electric light plant, opera house, two banks and a weekly newspaper.

A woodenware factory, a grist mill and a motor car plant comprise the chief industries.

Vanderbilt, with about 550 inhabitants, is located on the Michigan Central Railroad, eight and one-half miles north of Gaylord; has Congregational and Methodist churches, a shingle mill and a bank.

Transportation facilities of the county are the Michigan Central, Boyne City Gaylord & Alpena, and the Detroit and Charlevoix Railroads.

OTTAWA COUNTY.

Ottawa county was laid out in 1831, and was organized in 1837. The name is that of a once powerful tribe of Indians that inhabited the northwestern portion of the Lower Peninsula.

This county is located in the western part of the Lower Peninsula and is bounded on the north by Muskegon county, on the east by Kent county, on the south by Allegan county, and on the west by Lake Michigan.

The total land area is 357,839.46 acres, of which about 325,000 acres are in splendid farms.

The population is 45,301 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $44,347,162.

The school system is equal to that of any of the larger counties, there being 136 schools, 10,277 students in attendance, requiring the services of 297 teachers.

The county has 13 banks, 2 daily and 12 weekly newspapers, also good telegraph, telephone and rural mail service.

Grand Haven, the capitol city of the county has a population of about 5,856. It is the western terminus of the (D. & M. div.) Grand Trunk Railway, 31 miles west of Grand Rapids. It is also a station on the Pere Marquette R. R., and the Grand Rapids Grand Haven & Muskegon Ry. (electric). The town is picturesquely located at the mouth of the Grand River, on the shore of Lake Michigan, and is one of the most important ports on the shore of the lake.

The city has churches representing the leading denominations, a $60,000 high school, 1 union and 5 ward school buildings, an institute, a library, an opera house, first class hotels, 2 banks, a daily and a weekly newspaper. It is lighted by electricity and gas, has an excellent system of water works, good fire department, etc.

Grand Haven is in the center of Michigan's great fruit belt and large quantities of grapes and berries are shipped annually. Fishing is also an important interest.

Holland, the largest city in the county has a population of about 12,000. It is located on the Pere Marquette Ry., and on the Grand Rapids Holland & Chicago Ry. (electric), 20 miles south of Grand Haven and 25 southwest of Grand Rapids. It has a good natural harbor at the head of Black Lake and has a permanent channel of 18 feet.

The city is lighted by electricity and gas, has water works, fire department, excellent sewerage system, churches of the leading denominations, a high school and 5 ward schools and Hope College, said to be the seat of learning of the Reformed church in America. The Western Theological Seminary of the Reformed church in America is also located here. One daily and five weekly newspapers are published here.

Holland is an important fruit market and general farm produce is largely shipped. The leading manufactories are woodenware and leather. There are also planing mills, iron foundries, glass, machinery, tool, chemical engine, screen, basket, piano and furnace factories, a beet sugar factory, the second largest pickle works in the United States, roller flouring mills, canning factories, furniture factories, a rail way printing plant, saw mills, shoe factory, etc.

Adjacent to the city are located three large summer resorts.

Other thriving towns of the county are Zeeland, Coopersville and Spring Lake.

The principal transportation facilities of the county are the Grand Trunk, Grand Rapids & Indiana, Pere Marquette Railroads, Grand Rapids Grand Haven & Muskegon (electric), Grand Rapids Holland & Chicago, (electric) and the Graham & Morton Trans. Co., Goodrich S. S. Line, Crosby Trans. Co., and the Grand Trunk Car Ferry.

PRESQUE ISLE COUNTY.

This county was laid out in 1840, and was organized in 1871. The county was so named from the narrow peninsula—presque isle—jutting out into Lake Huron toward the southern end of the county.

It is located in the extreme northeastern part of the Lower Peninsula and is bounded on the north by Cheboygan county and Lake Huron, on the east by Lake Huron, on the south by Montmorency and Alpena counties, and on the west by Cheboygan county.

The total land area is 428,874.97 acres. About 132,000 acres are already in good farms.

The population of the county is 11,249 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $5,457,792 on all taxable land. There are a total of 50 schools, 2,360 scholars in attendance, requiring 74 teachers.

The county has 4 banks and 4 weekly newspapers, also telephone, telegraph and rural mail service.

Rogers, the judicial seat of the county has a population of about 700. It is located on the shore of Lake Huron, 35 miles northwest of Alpena, 45 southeast of Cheboygan, and $11\frac{3}{4}$ miles from Metz Depot on the Detroit & Mackinac Railroad. It has Methodist, Lutheran and Catholic churches, a bank and a weekly newspaper.

The largest town in the county is Onaway, which has about 2,700 inhabitants. It is located on the Detroit & Mackinac Ry., 27 miles southwest of Rogers, 26 miles southeast of Cheboygan, and 46 miles northwest of Alpena, in the midst of timbered lands, agricultural lands, and trout streams. It has Episcopal, Methodist, Baptist and Catholic churches, good schools, municipally owned electric light and water plant, opera house, 2 public halls, good hotels, 2 banks and 2 weekly newspapers. The industries include manufactories of bicycle and automobile steering wheel rims, cooperage, saw mills, a foundry and machine shop, shingle mills, handle factory, stave and heading mills, planing mill, hoop mill, etc. Onaway is located near two of the best trout streams in northern Michigan—the Black and Rainy rivers.

Millersburg, with its 550 inhabitants, is located on the Detroit & Mackinac Ry., and on the Ocqueoc river, 18 miles southwest of Rogers, and midway between Alpena and Cheboygan. It has Methodist, Presbyterian and Catholic churches, a graded public school, a bank and a weekly newspaper.

The principal transportation facility of the county is the Detroit & Mackinac Railroad.

ROSCOMMON COUNTY.

Roscommon county was laid out in 1840 and was at that time called Mikenauk, the name of a famous Ottawa chief. Later, in 1843 the name was changed and in 1875 the county was finally organized. The name Roscommon was taken from a county in the central part of Ireland.

This county is located in about the north central part of the Lower Peninsula. Is bounded on the north by Crawford county, on the east by Ogemaw county, on the south by Clare and Gladwin counties, and on the west by Missaukee county.

The total land area is 338,315.33 acres, with about 34,000 acres now converted into farms.

The population is 2,274 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $2,628,967.

The county has a good school system, there being 27 schools, an enrollment of 551 students, and supplying positions for 38 teachers.

There is 1 bank and 1 weekly newspaper, also telegraph and telephone service in the county.

Roscommon is the county seat and has a population of about 550. It is a station on the Michigan Central Railroad, 43 miles south of Gaylord, 77 northwest of Bay City, and 105 south of Mackinaw City. It has Congregational, Methodist and Catholic churches, a graded public school, electric light and water works plant, a bank and a weekly newspaper.

The transportation facilities of the county are the Michigan Central, and Grand Rapids & Indiana Railroads.

SAGINAW COUNTY.

This county was first laid out in 1822 by Lewis Cass, then Governor of Michigan. It was again laid out by the Legislature in 1831 and was finally organized in 1835. The county takes its name from the river and bay of that name.

Saginaw county is located in the east central part of the Lower Peninsula. It is bounded on the north by Midland and Bay counties, on the east by Tuscola county, on the south by Shiawassee and Genesee counties, and on the west by Gratiot and Midland counties.

The total land area of the county is 520,291.45 acres. Of this number, about 431,000 acres are devoted to farms which are wonderfully productive.

The population is 89,290 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $62,859,589.

There are 193 schools, an enrollment of 15,837 pupils, requiring the services of 482 teachers.

The county has 17 banks, 2 daily and 11 weekly newspapers. Splendid telegraph, telephone and rural mail service is found in every community.

Saginaw, the largest city and judicial seat of the county has a population of about 50,510 (U. S. census 1910).

It is located on the Grand Trunk Ry. System, the Michigan Central R. R., Pere Marquette, the Saginaw & Bay City, (electric) and the Saginaw & Flint Ry., (electric), 93 miles northwest of Port Huron and 98 northwest of Detroit, at the point where the Bad Cass, Shiawassee and Tittabawassee rivers and Swan Creek unite to form the Saginaw river. Down these rivers were floated 16,000,000,000 feet of logs and in the early days Saginaw was dependent on activity as a lumber center. It is said more logs have gone down the Saginaw river than have been floated on any other stream in the world and the Saginaw manufacturing district has manufactured more pine timber than any other district in the world.

Coal and salt have taken the place of lumber in an industrial way, above ground the fertile fields of the Saginaw valley have shown what resources can be developed in the way of sugar beets and the

foundation has been laid for the long list of staple industries. There are numerous coal mines in the neighborhood of the city.

Saginaw has an area of about 12 square miles, 220 miles of streets, 68 miles of paving, 113 miles of public sewers, 30 miles of electric street railway, several parks covering in all about 240 acres, a first class water works plant, 101 miles of water mains, a thoroughly equipped fire department, police department, 26 public schools, one of the finest manual training schools in the country, costing about $250,000, a number of parochial schools, churches of the leading denominations, several hospitals, beautiful first class hotels, theatres, magnificent federal building and free public library, etc.

The city has a great diversity of industries, some of which are automobiles and auto parts, agricultural implements, maple flooring, wood alcohol, barrels, beer and malt, lumbering tools, boilers, brass castings, brick, carriages, corsets, coal cars, elevators, furniture, gas engines, glass, matches, motors, underwear, portable houses, patent medicine, pianos, railroad machinery, sash, doors, and blinds, saws, seed cleaning machinery, wagons, wheelbarrows, windmills, woolen goods, etc.

Other important towns of the county are Chesaning, Frankenmuth, Merrill, and St. Charles.

A very fine quality of bituminous coal has been found at a depth of from 218 to 300 feet where a test has been made in this county.

The principal transportation facilities of the county are the Michigan Central, Pere Marquette, Grand Trunk Railways; Saginaw & Flint Ry., (electric) and the Saginaw & Bay City, (electric).

SANILAC COUNTY.

Sanilac county was laid out in 1822 and was organized in 1848. The county takes its name from a famous Indian chief who took part in the early wars between the Iroquois and Wyandottes.

It is located in the extreme eastern part of the Southern Peninsula. Its boundaries are Huron county on the north, Lake Huron on the east, Lapeer and St. Clair counties on the south, and Lapeer and Tuscola counties on the west.

The total land area is 616,213.60 acres. Of this number about 552,000 acres are devoted to splendid farms.

The population is 33,930 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $25,979,839.

There are 159 schools, furnishing positions for 79 teachers and an enrollment of 8,659 students.

The county has 26 banks and 12 weekly newspapers.

Good telegraph, telephone and rural mail service is found in nearly every locality.

Sandusky is the judicial seat of the county and has a population of about 1,000. It is located on the Pere Marquette Ry., 8 miles west of Carsonville, and 46 northwest of Port Huron; has Episcopal, Methodist, and Presbyterian churches, electric light and power plant, opera house, water works, sewerage, good hotels, 2 banks and 2 weekly newspapers.

Croswell, the largest town in the county has about 1,500 inhabitants. It is located on the Black river and on the Pere Marquette Ry., 20 miles southeast of Sandusky, 26 above Port Huron and 90 above Detroit.

It has large area of fine agricultural territory tributary for which it is the receiving and distributing point. It is lighted by electricity, has good sewerage system, water works, churches of many denominations, excellent public schools, opera house, sugar factory, brick and tile works, flour mill, creamery, bridge and culvert works, 2 banks, 2 newspapers, etc.

Other towns of the county include Marlette, Applegate, Brown City, Deckerville, Forestville, and Lexington, all in a good agricultural section.

The principal transportation facilities of the county are the Pere Marquette, Detroit Bay City & Western, and the Detroit and Huron Railroads.

SCHOOLCRAFT COUNTY.

This county was laid out and organized in 1848 and was named in honor of Henry Rowe Schoolcraft, whose name is associated with his researches in all matters connected with the Indians.

This county is located in about the central part of the Upper Peninsula. It is bounded on the north by Alger county, on the east by Luce and Mackinac counties, on the south by Lake Michigan and on the west by Alger and Delta counties.

The total land area is 758,095.79 acres, of which about 46,000 acres are now in good farms. Population, 8,681. (1910 census.)

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $8,390,564. The school system is equal to that of many of the larger counties, there being 34 schools, an enrollment of 1,848 students requiring the services of 79 teachers.

The county has 2 banks and 2 weekly newspapers, telegraph, telephone and rural mail service.

Manistique, the largest city and judicial seat of the county has a population of about 5,000. It occupies a beautiful location on the shore of Lake Michigan, at the mouth of the Manistique river, 90 miles by water from St. Ignace, 107 from Sault Ste. Marie and 259 from Chicago. It is a station on the Milwaukee St. Paul and St. Ste. Marie Ry., and on the Manistee and Northeastern railroads.

The city is electrically and gas lighted, has a good sewer system, a fine system of water works, well equipped fire department, beautiful churches of the leading denominations, an opera house, hospital, a splendid school system, 2 banks and 2 progressive newspapers. The principal industries include lumber mills, chemical works, lime factory, box factory, tannery, planing mills, etc. The magnificent areas of scenery, good hunting and fishing has made Manistique well known as a summer resort.

Transportation facilities of the county include the Duluth South Shore & Atlantic Ry., Manistique Ry., Ann Arbor Car Ferry, Manistee & Lake Superior Ry., and the Minneapolis St. Paul & Sault Ste. Marie Ry.

SHIAWASSEE COUNTY.

Shiawassee county was laid out in 1822 and was organized in 1837. The name is taken from the river extending through the county which derives the name from the words meaning "straight ahead."

It is located in about the south central part of the Lower Peninsula and is bounded on the north by Saginaw county, on the east by Genesee county, on the south by Ingham and Livingston counties, and on the west by Clinton county.

The total land area is 345,200.32 acres. Of this number about 328,000 acres are in splendid farms.

The population is 33,246 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $30,723,295.

There are 128 schools, furnishing positions for 251 teachers, and a total enrollment of 6,515 students.

The county has 12 banks, 2 daily and 9 weekly newspapers. Telegraph, telephone and rural mail service is found throughout the county.

Corunna, the judicial seat of the county has a population of about, 1,384. It is located on the Grand Trunk Ry. and the Ann Arbor Railroad, the Owosso & Corunna Electric Ry., and on both sides of the Shiawassee river, 3 miles from Owosso, 39 south of Saginaw, 30 northeast of Lansing, 22 west of Flint and 75 northwest of Detroit. It has Episcopal, Presbyterian, Methodist, Free Methodist and Baptist churches, a fine school house, a library, a beautiful park, a court house costing about $142,000, a bank, 2 weekly newspapers.

Furniture, lumber, flour, robes and cigars are manufactured, and coal is mined and shipped.

Owosso is the largest city in the county and has about 11,000 inhabitants. It is situated on the Shiawassee river and on the Ann Arbor, the Grand Trunk, and Michigan Central roads, 3 miles northwest of Corunna, 28 from Lansing and 78 from Detroit. The city is lighted by electricity, has a municipal water works system, 6 miles of street paving, sewerage system, fire department, opera house, a $65,000 post office, 4 school buildings, churches of many denominations, 3 banks, 2 daily newspapers, etc.

The car shops of the Ann Arbor Railroad are located here giving employment to a large number of men. The city's manufacturing interest include the second largest casket company in the world, one of the biggest motor truck factories in the United States, a table plant, stove works, iron and engine works, screen door and sash works, one of the largest butter concerns in the State, packing house, artificial ice plant, handle works, carriage and sleigh works, knitting works, planing mills, flour mill, sugar plant, etc.

Other important towns of the county all located in good agricultural sections are Bancroft, Byron, Durand, Laingsburg, Morrice, Perry, and Vernon.

Durand, with a population of about 2,500, is located at the junction of the Grand Trunk, Grand Trunk Western, and Ann Arbor Railroads, 8 miles southeast of Corunna, 17 from Flint and 67 from Detroit. The Grand Trunk Railroad has spent something like $300,000 on property in and around Durand, including a round house, one of the largest on its system, a $100,000 depot, coal chutes, carpenter shop and foundry, etc. The city has a municipally owned electric light and water plant, Congregational, Episcopal, Methodist, Baptist, Christian and Catholic churches, 2 school buildings, a combination fire hall, council chamber, public library and city office building, a fire department, 7 miles of sewers, a creamery, machine and stamping works, a hoop works, flour mill, 2 grain elevators, a $10,000 Y. M. C. A. building, 2 banks, a weekly newspaper, etc.

Transportation facilities of the county are the Grand Trunk, Michigan Central, Ann Arbor Railroads, and the Michigan United Traction Co., (electric).

ST. CLAIR COUNTY.

St. Clair county was laid out and organized in 1821 and is thought to have been named in honor of General Arthur St. Clair, first Governor of the Northwest Territory.

This county is located in about the southeastern part of the Lower Peninsula. It is bounded on the north by Sanilac county, on the east by Lake Huron and the St. Clair river, on the south by Anchor Bay, Lake St. Clair and Macomb county, and on the west by Lapeer county.

The total land area of the county is 443,391.12 acres, of which about 415,000 acres are already in wonderfully productive farms.

The population is 52,341 (1910 census).

The valuation of taxable property, as estimated by the State Board of Tax Commissioners in 1911, is $48,470,323.

There are 174 schools, an enrollment of 9,802 students, giving positions to 336 teachers.

The county has 15 banks, 1 daily and 10 weekly newspapers, also good telegraph, telephone and rural mail service.

Port Huron is the judicial seat and largest city in the county and has a population of about 23,000. The city is advantageously located at the foot of Lake Huron at the head of St. Clair river, 65 miles by water, and 57 by rail from Detroit, and 113 from Lansing. It has 7 miles of water front, 3 miles of which are given over to ideal homes and bathing beaches. It is a station on the Pere Marquette and the Grand Trunk Rys., with the Detroit United Railway interurban line to Detroit. Two ferry lines connect the city with Sarnia and Port Edward, on the Canadian side of the river. The railway tunnel under the St. Clair river, built by the Grand Trunk Railway, is one of the greatest engineering achievements on the continent. It is over a mile in length from the American to the Canadian side and cost about $3,000,000 to build. This is an important port of entry and a large customs business is transacted. There are two dry docks and three ship yards. The city is lighted by electricity, has broad cement walks, 25 miles of good pavement, modern system of water works, thoroughly equipped fire departments, police department, about 75 acres of public parks, a handsome court house, and city hall, auditorium, opera houses, a customs house and post office building, a $30,000 Y. M. C. A. building, a hospital costing about $40,000, and a detention hospital, churches representing the leading denominations, 16 public schools including the County Normal, a beautiful library, 4 banks, 1 daily and 1 weekly newspaper, etc.

The larger industrial institutions include an engine and thresher works, a sulphite fibre works, a salt factory which is one of the largest in the world, automobile factory, knitting factory, an auto body factory, planing mills, wagon works, broom factories, boiler works, etc.

Other thriving communities of the county are Marine City, St. Clair, Algonac, Capac, Emmet and Yale, all surrounded by good farms.

The principal transportation facilities of the county are the Pere Marquette, Grand Trunk, Michigan Central, Port Huron & Southern Rys., Detroit United Railway (electric), Star Cole Line, Detroit & Cleveland Nav. Co., Erie & Michigan Ry. and Nav. Co., Northern S. S. Co., & Erie & Western Trans. Co., (Anchor Line) and the Northern Trans. Co.

ST. JOSEPH COUNTY.

This county was laid out and organized in 1829 and takes its name from the river which flows through it and the river in turn was so called in honor of the patron Saint of New France.

St. Joseph county is located in the extreme southern part of the Lower Peninsula. It is bounded on the north by Kalamazoo county, on the east by Branch county, on the south by Indiana, and on the west by Cass county.

The total land area is 319,794.45 acres, of which nearly 301,000 acres are in farms which rank among the best in the State.

The population is 25,499 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $29,099,846.

There are 128 schools, furnishing positions for 227 teachers, and a total enrollment of 4,729 students.

The county has 13 banks. 1 daily and 8 weekly newspapers. First class telegraph, telephone and rural mail service is found in every community.

Centerville, the judicial seat of the county has a population of about 700. It is located on the Michigan Central Railroad and on the Prairie river, 64 miles southwest of Jackson and 141 from Detroit. It has Baptist, Lutheran, Methodist and Presbyterian churches, electric light, water works, fire department, a bank and a weekly newspaper.

Sturgis, one of the largest cities of the county has about 4,500 inhabitants. It is located in the heart of one of the richest and most productive sections of the State, at the intersection of the Grand Rapids & Indiana, and the Lake Shore and Michigan Southern Rys., 13 miles southeast of Centerville, 85 from Grand Rapids. It owns and operates its own electric light, power and water plant, has a fire department, sanitary sewerage system, broad streets, churches of many denominations, a public library, 2 banks and 2 live newspapers.

The manufactures embrace, furniture, children's go-carts, steel tanks, shears, stair rods, brass goods, plumbers' goods, reels, corn poppers, doors, blinds, medicines, woodenware, etc.

Other towns of the county are Burr Oak, Colon, Constantine, Mendon, Three Rivers, and White Pigeon.

Three Rivers, with a population of about 5,000, is located at the junction of the Portage, Rock and St. Joseph rivers, hence the name, and is a station on the Michigan Central Railroad, and the Lake Shore and Michigan Southern Railway, 6 miles west of Centerville.

The location of the city is unique in itself and each of the three streams have wide sweeping bends and are bordered with rich farm lands and woods. The city has broad, well paved and beautifully shaded streets, is lighted by electricity, has water works, sewerage system, fire department, several churches, a $30,000 union high school, a commercial college, a public library, 4 ward schools, an opera house, first class hotels, 2 banks, a daily newspaper, etc. Each of the rivers offer excellent water power facilities and each is harnessed by a mammoth cement dam.

The principal manufactures embrace interurban cars, hand cars, observation cars and railroad velocipedes, sweaters, wool undergarments, paper, rattan furniture, brass goods, farm implements,

electrical supplies, castings, etc. There is also a pork packing establishment, 2 robe tanneries and one of the largest strawberry nurseries in the world.

The transportation facilities of the county are the Michigan Central, Lake Shore & Michigan Southern, Grand Rapids & Indiana, and the Grand Trunk Railroads.

TUSCOLA COUNTY.

This county was laid out in 1840 and was organized in 1850. The name is thought to mean "level lands."

It is located in about the east central part of the Lower Peninsula and is bounded on the north by Saginaw Bay and Huron county, on the east by Sanilac county, on the south by Lapeer and Genesee counties, and on the west by Saginaw and Bay counties.

The total land area is 454,440.14 acres. Of this number about 451,000 acres are devoted to fine farms.

The population is 34,913 (1910 census).

In 1911 the State Board of Tax Commissioners placed a valuation of $26,092,395 on all taxable lands.

There are 157 schools, an enrollment of 7,693 students, requiring the services of 248 teachers.

The county has 23 banks and 10 weekly newspapers, also good telegraph, telephone and rural mail service in every community.

Caro is the county seat and the largest town. The population is 2,500. This town is located on the Caro branch Bay City division Michigan Central Railroad, and Detroit Bay City & Western Ry., 32 miles southeast of Bay City, 39 miles north of Lapeer and 100 miles northwest of Detroit. It is lighted by electricity, has an excellent system of water works, a voluntary fire department, good hotels, churches of the leading religious denominations, good schools, 2 banks, 2 newspapers and one of the largest beet sugar factories in the State.

Vassar, another town in the county is advantageously located on the Cass river and on the Michigan Central and Pere Marquette Railroads, 13½ miles southwest of Caro and 86 from Detroit.

It is surrounded and supported by a rich agricultural section, is lighted by electricity, has broad, well shaded and well paved streets, a fine system of water works, a fire department, natural drainage aided by a sanitary sewerage system, a public library, opera house, good hotels, several churches, a splendid public school system, 4 banks and 2 newspapers.

The manufacturing interests include flour and feed mills, shipping crate factory, machine shop, milk condensing factory, dye factory, cement block works, grain elevators, etc.

Other towns in the county are Cass City, Fairgrove, Gagetown, Kingston, Mayville, Millington, and Reese, all in a good agricultural section.

The transportation facilities of the county are the Michigan Central R. R., Pere Marquette R. R., Pontiac Oxford & Northern R. R., Detroit & Huron R. R., Detroit Bay City & Western R. R.

VAN BUREN COUNTY.

Van Buren county was laid out in 1829, was organized in 1837 and named in honor of Secretary of State Martin Van Buren.

It is located in the southwest part of the Lower Peninsula and is bounded on the north by Allegan county, on the east by Kalamazoo county, on the south by Cass county, and on the west by Lake Michigan and Berrien county.

The total land area is 391,442.62 acres, of which about 362,000 acres are in wonderfully productive farms.

The population is 33,185 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $35,164,410.

There are 155 schools, a total enrollment of 6,824 students, employing 341 teachers.

The county has 14 banks, 2 daily and 9 weekly newspapers. Good telegraph, telephone and rural mail service is found in every locality.

Paw Paw is the judicial seat of the county and has about 1,800 inhabitants. It is situated on the Kalamazoo Lake Shore & Chicago Ry., and on the Paw Paw river, 18 miles southwest of Kalamazoo, 4 from Lawton, where connections is made with the main line of the Michigan Central R. R., 15 miles from Hartford, where connection is made with the main line of the Pere Marquette R. R., and 33 miles from South Haven, where connection is made with the Michigan Central Railroad and a line of steamers plying to Chicago. Paw Paw is lighted by electricity, has water works, sewers, fire department, churches of many denominations, excellent schools, an opera house, 2 banks and 2 weekly newspapers.

Wheat, pork, live stock, beans, peaches, apples, grapes and small fruits are shipped.

South Haven is the largest town in the county and has a population of about 4,000.

This city occupies a commanding position on the shore of Lake Michigan at the mouth of the Black River, which forms a safe and commodious harbor. It is a station on the Michigan Central Railroad and on the Kalamazoo Lake Shore & Chicago Railroad, 30 miles northwest of Paw Paw, 40 from Kalamazoo, and 75 by water from Chicago. It has well laid out and shaded streets, is lighted by electricity, has a good system of water works, a fire department, sewerage system, opera house, churches of several denominations, a splendid public school system, a $15,000 public library, a gas plant, two banks, four newspapers, etc.

The more prominent industries embrace piano manufacturing, fruit packages and lumber manufactories, canning factory, wood carving works, foundry, planing mills, syrup, pickle, vinegar and basket factories, etc.

Other enterprising towns of the county are Hartford, Lawton, Bangor, Bloomingdale, Decatur, Gobleville, and Lawrence. The surrounding country is well adapted for agriculture and fruit growing and wheat, live stock, peaches and apples are exported.

Fruit growing is however, the principal industry and large quantities of fruit are shipped.

The principal transportation facilities of the county are the Michigan Central R. R., Pere Marquette R. R., the Kalamazoo Lake Shore & Chicago R. R., and the Chicago & South Haven S. S. Line.

WASHTENAW COUNTY.

Washtenaw county was laid out in 1822, and was organized in 1826. This county was part of the region lying west of the Detroit district commonly called by the Chippewa Indians "Washtenong," meaning a river that extends far off, referring to the Grand River.

It is located in the southeastern part of the Lower Peninsula and is bounded on the north by Livingston and Oakland counties, on the east by Wayne county, on the south by Lenawee and Monroe counties, and on the west by Jackson county.

The total land area is 454,047.24 acres. Of this number about 428,000 acres are in splendid farms.

The population is 44,714 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $54,719,685.

The county has a fine school system. There are 174 schools, a total enrollment of 7,818 students, requiring the services of 341 teachers.

The county has 16 banks, 3 daily and 16 weekly newspapers.

Good telegraph, telephone and rural mail service is found throughout the county.

Ann Arbor, the capitol city of the county, has a population estimated at about 16,000. This city is, of course, most widely known as the seat of Michigan's great State University. It is situated on the Huron river, on the main line of the Michigan Central R. R., on the Ann Arbor R. R., and on the Detroit United Railway, (electric), 38 miles from Detroit. The city is lighted with electricity and a large well established gas company also furnishes light and fuel gas, has a good sewerage system, a court house

erected at a cost of about $75,000, well equipped fire department, a $45,000 Y. M. C. A. building, an excellent public school system including one of the finest high school buildings in the state erected at a cost of about $300,000, a beautiful new auditorium, first class hotels, 200 acres of parks and boulevards, a beautiful public library, churches of many denominations, 5 banks, 2 daily newspapers, etc.

The industrial institutions include manufactories of pianos, organs, furniture, agricultural implements, lamps, ladders, automobile attachments, hay baling machines, flour, corsets, skirts, waists, baking powder, carriages, wagons, brick, tile, cement building block, beer, boilers, engines, sash, doors and blinds, knitted goods, trusses, beet sugar machinery, pumps, etc.

Ypsilanti, the second largest town in the county has a population of about 6,230. It is located on the Lake Shore and Michigan Southern Railroad, and the Michigan Central Railroad, and the Detroit United Railway, (electric), 29 miles southwest of Detroit, and 8 southeast of Ann Arbor. It is lighted by electricity, and has an excellent system of public water supply, has churches of the leading denominations, excellent schools, a ladies' library, an opera house, a business college, first class hotels, 2 banks and a daily newspaper. Ypsilanti is the seat of the State Normal College.

The manufacturing interests include paper mills, foundries and machine shops, flour mills, knitting mills, a creamery, novelty works and manufactories of carriages, wagons, buggy bodies, rubber tire setters, flour mill and elevator machinery, bean pickers, underwear, farm implements, axe handles, sash, doors, blinds, dress stays, etc.

Other important towns of the county are Chelsea, Dexter, Manchester, and Saline.

Chelsea is located on the Michigan Central R. R., and on the Detroit Jackson & Chicago Ry., 14 miles west of Ann Arbor, and 54 from Detroit. It has a municipal electric light plant and water works system, churches of the leading denominations, excellent educational advantages, 2 banks and 2 weekly newspapers.

The country contributory to Chelsea is very fertile and is one of the best wheat raising districts in the State. The principal shipments are cereals, wool, fruit, berries and live stock.

The principal transportation facilities of the county are the Pere Marquette R. R., the Michigan Central R. R., Ann Arbor R. R., Lake Shore & Michigan Southern R. R., Wabash R. R., and the Detroit United Railway, (electric.)

WAYNE COUNTY.

In 1796, Secy. Sargent, acting Governor, instituted the county of Wayne. It originally included all the Lower Peninsula and a large section of Indiana and Ohio and a strip along the west shore of Lake Michigan, (for the purpose of including the settlement of Green Bay), and the east part of the Upper Peninsula. For a name they selected that of Mad Anthony Wayne—a conquering hero then in their midst.

The present county of Wayne is located in about the south east corner of the Lower Peninsula. It is bounded on the north by Oakland and Macomb counties, on the east by the St. Clair river and Lake St. Clair, on the south by the St. Clair river and Monroe county, and on the west by Washtenaw county.

The total land area is 367,038.57 acres. Of this number about 317,000 acres are in fine farms.

The population is 531,590 (1910 census).

The valuation of taxable property as estimated by the State Board of Tax Commissioners in 1911, is $695,913,145.

There are 254 schools with a total enrollment of 91,615 students, requiring the services of 2,214 teachers.

The county has 30 banks, 8 daily newspapers and 43 weekly newspapers.

Telephone, telegraph and rural mail service is found in every locality throughout the county.

Detroit the largest city in the State and the county seat of Wayne county has a population of over 500,000. The city has an area of 41.44 square miles, 202 miles of public sewers, 480 miles of lateral

sewers, 400 miles of paved streets, 31 parks and parkways with a combined acreage of 1,244, a water works plant with a daily capacity of about 177,000,000 gallons, a municipally owned electric light plant, fire and police departments which rank among the best in the country, 98 public school buildings, a beautiful public library, many churches representing nearly every denomination, a Y. M. C. A. building erected at a cost of about $750,000, many banks, newspapers, etc.

From a standpoint of beauty, there are few cities that can compare with it, and situated on the pathway of the commerce of the Great Lakes, Detroit does not watch it all go by, by any means. Cases, boxes, bales, barrels, bags and packages, will be found destined for every civilized land and bound for all points along the chain of the inland seas.

An important aid to Detroit's commerce and traffic is the tunnel beneath the river, completed and opened in 1910 by the Michigan Central Railroad, at a cost of approximately $10,000,000. As an engineering feat, it takes rank with the famous undertakings of the world.

A few of the principal manufacturing interests of the city are automobiles and auto parts, clothing, boots and shoes, car building and repairing, cigars, food products, stoves and other heating apparatus, soda ash and other alkaline products, printing, furniture and numerous other industries.

Wyandotte has a population of about 10,000. It is located on the Detroit river and on the Detroit & Toledo Shore Line, the Detroit Toledo & Ironton, the Lake Shore & Michigan Southern and the Michigan Central Railroads, and the Detroit United Electric Ry., 12 miles from Detroit, and 47 from Toledo. The city has municipally owned water and electric light plants, paved streets, fire department, a public library, churches of the leading denominations, a central school building, 2 ward schools and 6 parochial schools, 2 banks and 2 weekly newspapers.

This city possesses some of the largest manufacturing plants in the State. Among the more prominent industries are 3 salt manufacturing plants, a ship building company, chemical manufactory, cement factory, rug and fur factory, foundries, trunk factory, a sheet metal works, etc.

Other enterprising cities and towns of the county are Belleville, (pop. 500), Dearborn (pop. 1,000), Ford City (pop. 1,800), Grosse Pointe, (Suburb of Detroit), Hamtramck, (pop. 4,000), Highland Park (suburb of Detroit) River Rouge (pop. 4,500), St. Clair Heights, (pop. 1,300), Trenton (pop. 1,225), Plymouth, (pop. 2,000) and Wayne, (pop. 1,500).

These towns are surrounded by a thickly settled and rich agricultural district and ship large quantities of grain, hay, straw, fruit, potatoes and farm produce of all kinds.

The principal transportation facilities of the county are the Detroit Toledo & Ironton R. R., Pere Marquette R. R., Wabash R. R., Detroit & Toledo Shore Line, Lake Shore & Michigan Southern R. R., Michigan Central R. R., Detroit Monroe & Toledo Short Line R. R., Grand Trunk, Canadian Pacific, Detroit United Ry., (electric), Northern S. S. Co., Erie & Western Trans. Co., (Anchor Line), Detroit & Buffalo S. B. Co., E. M. Ry. & Nav. Co., Detroit & Cleveland Nav. Co., and other boat lines.

WEXFORD COUNTY.

This county was laid out in 1843 and was organized in 1869. It was originally named "Kautawabet" and is the last of the changes to Irish names.

It is located in about the northwestern part of the Lower Peninsula and is bounded on the north by Grand Traverse county, on the east by Missaukee county, on the south by Lake and Osceola counties, and on the west by Manistee county.

The total land area is 366,675.69 acres, of which about 148,000 acres are devoted to farms.

The population is 20,769 (1910 census).

In 1911, the State Board of Tax Commissioners placed a valuation of $15,544,273 on all taxable lands.

There are 88 schools, a total enrollment of 5,175 students, furnishing positions for 201 teachers.

The county has 8 banks, 3 daily and 5 weekly newspapers, also telegraph, telephone and rural mail service.

Cadillac is the judicial seat, also the largest city in the county and has a population of about 10,000.

It is attractively located on the shore of Lake Cadillac and on the Grand Rapids & Indiana and Ann Arbor R. Rys., 98 miles north of Grand Rapids. It dates its settlement from 1871, previous to which time, it was the heart of an unbroken wilderness, surrounded by forests of both pine and hardwood timber. The city has electric and gas lights, a water works system, an excellent system of sewerage, a beautiful new court house, a fine city hall, public library, graded schools, a first class high school, two banks, 2 daily and 2 weekly newspapers, churches of the leading denominations, etc.

The principal shipments consist of large quantities of potatoes, other farm products, lumber, veneer, fruit packages, store furniture, broom handles, last blocks, billiard cues, lath, maple flooring, charcoal, wood alcohol, pig iron, saw mill machinery, chemicals, carriage stock and shingles. Other industries include boiler shops, stave and heading works, basket and brick works, a woodenware factory, table factory, smelting works, flouring mills, etc.

Other towns of the county include Buckley, Harrietta, Manton, Mesick, and Sherman.

Manton which is located in a good agricultural section is a station on the Grand Rapids & Indiana R. R., 12 miles north of Cadillac and 110 from Grand Rapids. It owns and operates its own electric light and water works plant, has a sanitary sewerage system, wide and well laid out streets, an opera house, good hotel, a public school building costing about $16,000, churches of the leading denominations, a school and township library, a bank and a live weekly newspaper.

The industries include 2 saw mills, stave mill, flour mill, pickle factory, lumber mill, grist mill, etc.

The transportation facilities of the county are the Ann Arbor R. R., Grand Rapids & Indiana R. R., Manistee & Northeastern R. R., and the Manistee and Luther Railroad.

THE DEVELOPMENT BUREAUS.

Following will be found the name and address of the Secretaries of the three large Development Bureaus of the State. These organizations have been doing splendid publicity work for the several counties comprising their territory.

The territory of the Upper Peninsula Bureau consists of the entire Northern Peninsula.

The Territory of the Western Michigan Bureau comprises all of the counties in the west portion of the Lower Peninsula from the Straits of Mackinac to the southern boundaries of Kent and Ottawa counties.

The Territory of the Northeastern Michigan Bureau comprises all of the counties in the northeast portion of the State, from the Straits of Mackinac to the southern boundary of Saginaw County.

UPPER PENINSULA DEVELOPMENT BUREAU.

C. W. Mott, Secretary. Menominee, Michigan.

WESTERN MICHIGAN DEVELOPMENT BUREAU.

John I. Gibson, Secretary, Grand Rapids, Michigan.

NORTHEASTERN MICHIGAN DEVELOPMENT BUREAU.

T. F. Marston, Secretary, Bay City, Michigan.

List of Civic, Industrial and Commercial Organizations, together with the name and address of the Secretary, from whom information may be obtained concerning almost any City or Community of the State.

CITY OR TOWN.	COUNTY.	ORGANIZATION.	SECRETARY.
Adrian	Lenawee	Commerce Club	Fred L. Johnson.
Albion	Calhoun	Business & Professional Men's Association	W. S. Price.
Allegan	Allegan	Board of Trade	Walter W. Miller.
Alma	Gratiot	Board of Trade	D. L. Johnson.
Alpena	Alpena	Chamber of Commerce	J. F. Wilkinson.
Ann Arbor	Washtenaw	Civic Association	Wm. W. Welsh.
Bad Axe	Huron	Bad Axe Board of Trade	G. E. English.
Battle Creek	Calhoun	Chamber of Commerce	Chas. W. Ward.
Bay City	Bay	Board of Commerce	Jas. C. McCabe.
Belding	Ionia	Board of Trade	F. L. Warner.
Benton Harbor	Berrien	Business Men's Association	M. J. Hall.
Bessemer	Gogebic	Bessemer Commercial Club	W. S. Baird.
Big Rapids	Mecosta	Big Rapids Board of Trade	W. A. Stillwell.
Boyne City	Charlevoix	Chamber of Commerce	A. Q. Urquhart.
Calumet	Houghton	Copper County Commercial Club	G. L. Price.
Cadillac	Wexford	Board of Trade	
Charlotte	Eaton	Commercial Club	
Cheboygan	Cheboygan	Chamber of Commerce	
Coldwater	Branch	Coldwater Commercial Club	S. A. Wakeman.
Croswell	Sanilac	Business Men's Association	J. W. Dexter.
Crystal Falls	Iron	Crystal Falls Club	Thos. Conlin.
Caro	Tuscola	Business Men's Association	
Cassopolis	Cass	Cassopolis Commercial Club	F. Fagler.
Chelsea	Washtenaw	Chelsea Business Men's Association	J. T. Woods.
Detroit	Wayne	Board of Commerce	Byres H. Gitchell.

CITY OR TOWN.	COUNTY.	ORGANIZATION.	SECRETARY.
East Jordan	Charlevoix	East Jordan Board of Trade	R. A. Brintnall.
East Tawas	Iosco	East Tawas Board of Trade	A. L. Black.
Eaton Rapids	Eaton	Commercial Club	Clarence D. Knapp.
Escanaba	Delta	Business Men's Association	Chas. F. Jacobson.
Elk Rapids	Antrim	Elk Rapids Citizen's Association	W. E. Olds.
Evart	Osceola	Evart Board of Trade	Wm. H. Umphrey.
Flint	Genesee	Board of Commerce	A. Galbraith.
Fremont	Newaygo	Board of Trade	
Fenton	Genesee	Fenton Board of Commerce	W. H. King.
Frankfort	Benzie	Board of Trade	
Gladstone	Delta	Gladstone Commercial Association	G. W. Jackson.
Grand Haven	Ottawa	Commercial Association	Jas. W. Oakes.
Grand Ledge	Eaton	Board of Commerce	C. Alexander.
Grand Rapids	Kent	Association of Commerce	W. K. Plumb.
Greenville	Montcalm	Greenville Board of Trade	Fred A. Gleason.
Grayling	Crawford	Crawford Co. Commercial Asso	M. Hanson.
Harbor Beach	Huron	Board of Trade	H. Binkle.
Hillsdale	Hillsdale	Business Men's Improvement Association	Geo. Lyons.
Holland	Ottawa	Board of Trade	Dick Boter.
Hudson	Lenawee	Hudson Business Men's Association	M. E. Power.
Harbor Springs	Emmet	Business Men's Association	Allen Reynolds.
Hart	Oceana	Commercial Club	
Highland Park	Wayne	Highland Park Board of Commerce	C. E. Gittins.
Holly	Oakland	Commercial Club	Henry Ellis.
Houghton	Houghton	Copper Country Commercial Club	G. L. Price.
Howard City	Montcalm	Board of Trade	R. S. Jennings.
Howell	Livingston	Commercial Club	A. R. Crittenden.
Ionia	Ionia	Business Men's Association	
Iron Mountain	Dickinson	Commercial Association	John Garvey.
Ironwood	Gogebic	Ironwood Commercial Club	H. M. Erickson.
Ishpeming	Marquette	Ishpeming Advancement Association	R. J. Wise.
Iron River	Iron	Commercial Club	G. R. Walder.
Ithaca	Gratiot	Ithaca Board of Trade	Geo. Lampier.
Jackson	Jackson	Chamber of Commerce	Paul A. Leidy.
Kalkaska	Kalkaska	Kalkaska Board of Trade	I. M. Clark.
Kalamazoo	Kalamazoo	Commercial Club	F. C. Butler.
Lansing	Ingham	Chamber of Commerce	Roy R. Darwin.
Ludington	Mason	Board of Trade	H. C. Hutton.
Leslie	Ingham	Leslie Business Men's Association	W. F. Prescott.
Manistee	Manistee	Board of Trade	
Mancelona	Antrim	Mancelona Board of Trade	H. E. Wellman.
Manistique	Schoolcraft	Commercial Club	M. H. Barton.
Marquette	Marquette	Marquette Commercial Club	E. A. Daley.
Marshall	Calhoun	Marshall Board of Commerce	A. P. Grohens.
Mason	Ingham	Mason Business Men's Association	W. L. Clark.
Menominee	Menominee	Menominee Commercial Club	G. P. Chambers.
Midland	Midland	The Midland Men's Club	J. I. Jones.
Monroe	Monroe	Merchants & Manufactnrers Club	E. C. Steiner.
Mt. Clemens	Macomb	Business Men's Association	Clifton D. Jackson.
Muskegon	Muskegon	Chamber of Commerce	Louis H. Conger.
Marcellus	Cass	Marcellus Improvement Association	Oscar Romig.
Marlett	Sanilac	Business Men's Association	E. C. Burgett.
Morenci	Lenawee	Morenci Business Men's Club	O. J. McCrillis.
Niles	Berrien	Business Men's Association	Chas. E. Smith.
Northville	Wayne	Northville Business Men's Association	L. L. Ball.
Ontonagon	Ontonagon	Ontonagon Business Men's Association	T. A. Green.
Otsego	Allegan	Otsego Commercial Club	Geo. H. Gerphiede.
Owosso	Shiawassee	Improvement Association	
Petoskey	Emmet	Petoskey Business Men's Association	Watson Snyder.
Pontiac	Oakland	Pontiac Commercial Association	E. B. Linabury.
Port Huron	St. Clair	Business Men's Association	J. D. Asman.
Paw Paw	Van Buren	Commercial Club	
Plainwell	Allegan	Plainwell Business Men's Association	Foster Fuller.
Plymouth	Wayne	Plymouth Improvement Association	Wm. J. Burrows.
Reed City	Osceola	Board of Trade	A. M. Fleischhauer.
Richmond	Macomb	Business Men's Association	R. L. Skinner.
Rochester	Oakland	Rochester Board of Commerce	Geo. D. Slaymaker.
Saginaw	Saginaw	Board of Trade	M. L. Johnson.
Sault Ste. Marie	Chippewa	Soo Business Men's Association	John P. Old.
South Haven	Van Buren	Board of Trade	
Stanton	Montcalm	Stanton Board of Trade	Clyde F. Smith.
St. Ignace	Mackinac	St. Ignace Business Men's Association	E. H. Hatchkiss.
St. Johns	Clinton	Commercial Club	S. L. Marshall.
St. Joseph	Berrien	St. Joseph Development Co.	
St. Louis	Gratiot	Chamber of Commerce	
Sebewaing	Huron	Business Men's Association	H. G. Muellerweis.
Shelby	Oceana	The Shelby Commercial Club	F. E. Lewellyn.

CITY OR TOWN.	COUNTY.	ORGANIZATION	SECRETARY.
Sparta	Kent	Business Men's Organization	Erastus Smith.
St. Charles	Saginaw	St. Charles Board of Trade	C. D. Downing.
Tecumseh	Lenawee	Commerce Club	
Tawas City	Iosco	Tawas City Improvement Association	L. A. Patterson.
Three Rivers	St. Joseph	Three Rivers Commercial Club	John Comin.
Traverse City	Grand Traverse	Committee of 21	W. H. Umlor.
Union City	Branch	Business Men's Association	H. M. Teeter.
Vassar	Tuscola	Vassar Board of Trade	E. W. Ellis.
Vicksburg	Kalamazoo	Business Men's Association	Don B. Sharpe.
Whitehall	Muskegon	Booster Club	L. B. Gee.
Williamston	Ingham	Citizen's Association	R. B. Crapo.
West Branch	Ogemaw	West Branch Improvement Association	R. B. Haig.
Yale	St. Clair	Citizen's Improvement Club	Chas. H. Palmer.
Ypsilanti	Washtenaw	Ypsilanti Industrial Association	A. McAndrew.
Zeeland	Ottawa	Civic Club	Angus DeKruif.

CONCLUSION.

In the compilation of this book from such data as has been collected, it has been the aim and purpose to give a general idea of the resources of Michigan and to suggest the advantages which it possesses and the opportunities which it offers to the home seeker. While it is hoped that this publication, which is the first of its kind to be compiled by the state, will be the cause of inducing many who read it to visit the state and *Examine for themselves* the advantages it offers, it is also hoped that it will perform even a greater mission, namely, the stimulating of Michigan's own people to a deeper sense of appreciation of their home state. It would seem, then, that the first result to be hoped for is the establishment of faith among Michigan's own people, causing them to look over Michigan and Michigan's opportunities before seeking other climes for investments.

It is not to be expected that every man who settles in a new country will achieve a conspicuous success, but that the chances for success are greater in Michigan than in many more widely advertised territories is maintained and is susceptible of proof.

The last word, however, to the prospective settler, whether he be from within or from without the state, is a warning against buying advertised lands in Michigan, or anywhere for that matter, without having first made the fullest investigation of the property; the character of the soil; the proximity to markets; and the chances to make a success upon the land by the persons of average ability.

The Commission is deeply appreciative of the courtesies extended by the several state departments, officers, organizations and individuals who have so kindly furnished data and illustrations for this compilation, and while space will not permit personal mention, it is hoped that each will consider himself personally thanked for his assistance.

Appended hereto is a list of the names and addresses of the Secretaries of the several development bureaus of the state, which are semi-official organizations, and also a list of the commercial clubs and industrial organizations in the various counties of the state, which are doing very effective publicity work. Reliable information as to the opportunities offered in their county or section of the state will be gladly furnished to anyone who will call upon or correspond with them.

The Michigan Agricultural College, at East Lansing, maintains an experiment station, where valuable information may be obtained free of charge upon many of the questions that confront the general farmer, stock raiser, dairyman, or the fruit grower. Special bulletins are issued concerning methods and culture of most any agricultural or horticultural crops, and may be had by addressing the Secretary of Michigan Agricultural College, East Lansing.

Attention is also called to the valuable information that may be obtained by addressing the State Geologist, Lansing, relating to the character of the soil of any portion of the state.

The Immigration department is, in a measure, a clearing house of general information for the entire state. Its services are placed at the disposal of anyone who wishes information concerning Michigan, and all inquiries upon the subject will be gladly answered. Address Commissioner of Immigration, Lansing, Michigan.

ERRATA.

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